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## ORIGINAL ARTICLES.

### CERTAIN CLINICAL OBSERVATIONS UPON HEART DISEASE.[1]

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IN thinking over subjects upon which to make a short address to you I could think of none which might prove of more interest than certain clinical observations upon heart disease, presenting the subjects to you as they have occurred to me. In the time allotted I shall be able only to touch upon the disappearance of the murmurs of mitral insufficiency, certain phases of mitral stenosis, and endocardial fever.

In my earlier medical life I was rather incredulous, when the statement was made to one with heart disease, which from all methods of reasoning was a mitral insufficiency dependent upon organic cause, that he might outgrow it. My former friend and colleague, the late Professor Austin Flint, would not infrequently cheer despondent patients with such a hopeful outlook. Hence I have taken especial interest in certain cases of this nature which have fallen under my own observation. Of course you are all familiar with the appearance and disappearance of a systolic mitral murmur during and following some severe illness, where such murmur may be taken to have indicated an insufficiency due to muscular weakness occasioned by the illness, and the disappearance to the improvement of the strength of the heart muscle preventing the previous leakage. Whether such explanation can be made to apply to the following cases I leave to you:

A young lady, aged thirteen years, had a well-marked murmur characteristic of mitral insufficiency, audible at the apex, plainly heard over the posterior part of the left chest, and nearly as much so on the right side. The history given to me at the time was that she had suffered from inflammatory rheumatism when much younger and that the heart disease had then developed. Under my observation she had only a moderate enlargement; there was no marked hypertrophy of the right ventricle. At times she would suffer from palpitation, and she was unable to stand much fatigue. From time to time she had slight attacks of subacute rheumatism. Only at intervals did her heart need regulation by digitalis. Reasonable counsel was given as to the mode of life she should lead, such as would prevent increase of the condition by forced exertion, over-fatigue or undue excitement. For eighteen years as I from time to time examined this young woman the murmur continued audible. But for two years past I have been unable to hear it except upon one occasion after a rather severe attack of influenza and then only for a couple of days.

In this instance a murmur characteristic of mitral insufficiency present for eighteen years under my own observation, and for several years prior to that under the observation of another physician, originating from an attack of rheumatism, has practically disappeared. We are obliged to ask What has produced this change? Two explanations more particularly can be offered. The first would claim that during all these years there had only been a persistence of such a state as exists in the insufficiency of weakness following disease, and that at no time had there been any distinct thickening or shortening of the mitral valves. The most admitted under this theory would be perhaps some dilatation of the left ventricle and especially of the mitral ring. It would also be claimed that as she became older the muscle force increased, and the base of attachment became firmer thus diminishing the size of the orifice and finally allowing the valves to so close as to prevent leakage. Under another explanation it might be supposed that the thickening of the valves was not great, the shortening hence trivial, and that the valve segments may have become united to such an extent as to prevent leakage, but not to so considerable a degree as to cause the evidence of mitral stenosis. Such an explanation occurred to my mind and induced me to endeavor to make out such a mitral presystolic murmur. But listen as I would I could not thoroughly satisfy myself as to its presence. This murmur, it may be stated, did not disappear because of heart weakness, for the patient since the murmur has been lost has been in better health than heretofore, and some of the previous restrictions have been withdrawn.

The other illustration also occurred in a girl, eight years of age at the time of the inception of her trouble. She at first had rheumatism, which was followed by mitral insufficiency. Later she had an attack of chorea and again subacute rheumatism.

[1] Read at the Centennial Celebration of the Medical and Chirurgical Faculty of Maryland, Baltimore, April 27, 1899.

The murmur as in the preceding case was audible over the back as well as on the front of the chest. From time to time as she was examined the murmur continued present until she had reached the age of eighteen. I had not seen her for more than a year, and was surprised at my inability to detect the previously present murmur. She stated that she felt well and was not now inconvenienced by her heart. I examined her subsequently with a similar result. Such commentary as I have made of the first patient will suffice for this.

In a third patient, also a young woman, who had a murmur of mitral insufficiency but not so well marked, nor so loud as the two above noted, death came about from an entirely different cause. At the autopsy made by a pathologist unaware of the previous history the report was that the heart was normal—unfortunately the hydrostatic test was not used, nor was the width of the mitral orifice noted. This young woman had the heart murmur develop as a sequel of rheumatism. The late Professor Flint had given her the assurance which I have above noted. I had examined her from time to time for several years always finding a mitral systolic murmur audible posteriously though when quiet in bed at the beginning of her serious sickness an examination did not disclose it. After this I did not see her, and only have the post-mortem record upon which to form a theory. It certainly points to the possibility of the continuance of a mitral leakage after rheumatism for years without the presence of organic change in the valves.

The speaker while upon this subject feels inclined to draw your attention to the disappearance of the murmur of mitral insufficiency in the course of Graves' disease (exophthalmic goiter). My inclination at one time was to suppose, in this disease, with a rather enlarged heart and a plainly audible murmur of this character, readily heard posteriorly unless the murmur disappeared fairly rapidly under treatment, that it would be a permanent affair. Whilst several cases of the disappearance of the murmur in this disease have come under my observation two only are possessed of sufficient interest to warrant a short outline of their history. The first occurred in a lawyer of thirty-five, who had come from the South to consult me. At home his disease had been considered severe neurasthenia. On his way to New York he had stopped at a medical college where the professor of medicine had informed him that he had incurable heart disease. Pending my arrival from a trip out of town he had consulted a neurologist, who had given him a diagnosis of embolism of the spinal cord. His condition was one of great weakness. He had marked tremor. The pulse was from 140 to 160 per minute. There was moderate exophthalmos, and the Von Graeffe symptom was well marked. The thyroid was fairly enlarged and the thrill and murmurs so characteristic were readily felt and heard over the arteries of the neck and over the thyroid. The heart was enlarged, somewhat weak, and beat as rapidly as the pulse indicated. He was weak and troubled with diarrhea. There existed a mitral insufficiency murmur plainly audible on the back of the chest. As occurs at times in Graves' disease, he would occasionally fall down while walking. The existence of an enlarged heart with a mitral systolic murmur had caused the diagnosis of incurable heart disease. The falling to the floor while walking, in a person with a loud heart murmur, had caused the diagnosis of embolism of the spinal cord and a correspondingly bad prognosis.

This patient made a complete recovery in the course of three months—under the use of iron, strophanthus, improvement of nutrition, the cure of the diarrhea, and the application of rest. He was much helped by the assurance of recovery. The mitral insufficiency murmur entirely disappeared.

The second patient was a lady of about forty years. Her disease had been due to or rather followed an accident. While traveling in a mountainous country the donkey on which she was riding slipped on the edge of a precipice, and she was saved by catching on a tree which grew below the level of the edge. The occasion of my seeing her was that a physician in attendance had told herself and her husband that she had incurable heart disease. When I first examined her she had moderate exophthalmos, an enlarged thyroid, and marked thrill and murmur over the arteries of the neck and thyroid. Her pulse was 120 to 130 per minute. The heart was somewhat enlarged by palpation and percussion, and a marked mitral systolic murmur was audible at the apex conveyed behind and heard on both sides posteriorly. She had lost weight. There was a fully marked tremor and a sense of heat. The Von Graeffe symptom was also present. Later edema of both limbs developed. I had told her husband that I thought she could be cured and that we should regard the heart murmur as due to muscular weakness if it should disappear within three months. This lady in the end made a complete recovery except as regards the exophthalmos, of which there was still some trace when I last saw her. The murmur, however, did not disappear for more than nine months, and when the edema of the legs developed I feared that I had been a bad prophet. The treatment which brought about recovery was assurance that she had a disease from

which she could get well, and not incurable cardiac disease, the use of strophanthus, iron, and when edema occurred the addition of digitalis to the strophanthus. Galvanism to the neck was also employed. The attempt was made to improve the nutrition. Two years after her recovery I examined her when she had come in from a walk of over a mile and it was impossible to hear any evidence of mitral leakage. Allow me to say in passing that my experience with Graves' disease in private practice has been that the patients recover. In hospital experience, on the other hand, the results have not been as good. This I ascribe in considerable degree to two facts: first, a large hospital with its attendant scenes and incidents is a poor place for this class of patients; and second, to the apparent impossibility of pursuing the same continued plan of treatment on a moderate basis.

Certain observations with mitral stenosis have also sufficiently interested me to place them before you. It is as you know very generally claimed that the mitral presystolic murmur is only audible over a limited area at or near the apex. In about one-third of the cases of this type of disease I think that one would be able to make a probable diagnosis by listening at the back of the chest below the angle of the scapula where in this proportion of cases a murmur can be heard, not so loud, nor so plain, it is true, as in front. This, of course, is in opposition to the generally received view, and is opposed to the teaching of many of the text-books on physical diagnosis. I feel assured that with a careful study of the facts of the case you will agree with me. No form of heart disease is more often overlooked than mitral stenosis, in which there exists only a slight presystolic murmur, and I am convinced that teachers of medicine should give more time to having students acquire the faculty of making the diagnosis of this type I have had four cases of this disease in which the first evidence of cardiac impairment was brought about by exercise at high altitudes. The first concerned a gentleman who had gone into a mine at Leadville (11,000 feet) and on coming to the surface suddenly lost the sight of one eye. On his return he consulted me with relation to this, which was found dependent upon embolism of the central artery of the retina. This had come from a heart of which the only lesion was mitral stenosis and its effects. From this time on he had gradually progressing cardiac impairment. The second concerns a lady, at that time living at Telluride (9000 feet) who brought her daughter to me suffering with chorea, and incidentally asked why she felt so bad when going up stairs at home. She had mitral stenosis of the type indicated, and was ignorant of the existence of heart disease, though she had consulted a number of physicians. Later I learned that she had been forced to seek a lower level, and was affected with cerebral embolism, aphasia, and hemiplegia. The third concerned a lady, who informed me that she had run at an elevation of 10,000 feet in the Himalayas. Previously she had been unaware of any heart trouble, but since she had suffered more or less from cardiac impairment. The fourth recently told me that she had run with a rifle in her hand several hundred feet at an elevation of 7000 feet in Yellowstone Park, when she dropped from inability to proceed and from cardiac distress. Since this time she had had more or less cardiac disturbance. Her heart exhibited the murmur mentioned. She consulted me for headaches, and not for the heart trouble, though in obtaining her history I found that she was unable to do much which had been formerly possible.

Again I have known several patients who have been examined on account of severe illnesses, in whom I have detected the murmur of mitral stenosis. In some of these on obtaining the history I found that where formerly they had suffered with what were considered asthmatic attacks, after taking to the bicycle there had been a marked improvement in their condition.

Another consideration worthy of a passing notice is the substitution of the mitral systolic murmur for the presystolic as the heart compensation is markedly disturbed. My attention was drawn to this years ago when teaching. A patient whom I had shown one year as a well marked illustration of mitral stenosis with a plain presystolic murmur, after being out at hard work would return with edematous legs, congested liver, etc., and be sent to me as a case illustrating mitral insufficiency and I would be forced myself to admit the change of the murmur. After rest and treatment very probably the old order of things would be reproduced. The systolic would give place to the presystolic, or the diastolic and presystolic. In the case of one patient this occurred three times. It is in part owing to the non recognition of this by some that part of the confusion with reference to the diagnosis of mitral stenosis has been produced. Well-marked mitral stenosis would be found at an autopsy in a person whose disease from the heart murmur had been considered mitral regurgitation. This occurs more especially in hospital practice and in patients coming in with much broken compensation. These have not, of course, been under observation by the same physicians previously.

Your president, Professor Osler, has done so much by his investigation and writing to inform the medical profession about malignant endocarditis that in

touching upon this as a third topic I feel much as he who brings coals to Newcastle. Still I trust that it will not burden you, if from a considerable experience I draw your attention to certain phases which have interested me. The disease is so protean in its manifestations, so different a clinical picture is presented by the sufferer with the acute variety compared with that presented by the victim of the chronic type, and the diseases with which mistakes in diagnosis are likely to be made are so divergent, that the question has forced itself upon my mind whether the employment of the term endocardial fever might not be of service. Owing to the number of manifestations which the disease presents we are in need of a number of subdivisions, if we wish to make the best use of the memory of our previous cases. It has also seemed to me that physicians with whom I have seen cases have not had their attention drawn to the possibility of the existence of the disease in such cases as were of the mild chronic type, when the terms ulcerative, infectious, malignant were employed. If among the fevers we could introduce the term endocardial, then the student would hold in mind the possibility that in any given case he must consider this as a possible position for the origin of fever. I must confess that the objection can be urged against its employment that we might as well speak of pleural, cerebral, and other fevers, as to consider the place instead of the process in designating a fever. However that may be I must confess that in not a few cases of the chronic type I have derived satisfaction from the use of the term. From such experience as I have had with the disease I would be inclined to make two separate divisions. The first would be according to the type—peracute, acute, subacute and chronic. The other would aim to present the different ways in which the disease may occur.

1. With heart murmur: (*a*) Hemorrhagic, (*b*) with embolism, (*c*) with or without hemorrhages, and febrile.

2. Without heart murmur: Still again according to the type of the fever we could very well make a classification with continued fever, with remittent fever, with intermittent fever, with chronic mild hectic fever.

Again it would not be difficult to construct a class as primary and secondary, using this designation even in a double sense, so as to include cases in which the inflammation affected a heart whose endocardium was previously healthy, and that which was previously diseased, or, on the other hand, to signify that the endocarditis was the primary lesion and such events as happened were dependent upon its affection, or that the inflammation of the endocardium was only part of a process whose origin was in a septic focus within the system.

Formerly I encountered a comparatively larger number of the acute cases, and my introduction to the case was more particularly to decide whether the person was affected with some infectious disease, and to give it, if possible, a name. I have thought it possibly profitable to present this part of the subject to you as I have been forced to consider it. The most frequent inquiry is, so far as the acute malignant type is concerned, whether the patient has possibly any of the malignant types of the ordinary infectious diseases. Especially may the mistake be made between purpura variolosa, cerebrospinal meningitis, and typhus fever. Only in the large seaboard cities is the last fever likely to be considered. In trying to determine whether a given case is more probably due to endocarditis or to another malignant process I have found that attention to the position of the hemorrhages is at times very helpful. Several times I have noted numerous small hemorrhages with slight nodular character in the palms of the hands and in the soles of the feet, when possibly the arms and the legs had but a scanty crop in malignant endocarditis, whereas this has not been my experience with the processes likely to be mistaken for it. The presence of hemorrhages in the conjunctiva is also more in favor of this disease, particularly if the inquiry be between it and typhus fever. While the presence of a heart murmur, together with the above events, suggests strongly ulcerative or malignant endocarditis, it is well not to argue thus without a definite basis. There exists no reason why a person with heart disease should not develop one of the malignant types of fevers. If a patient be in a hospital-ward, hotel, or boarding-house then we are compelled to endeavor to solve the question at as early a period as possible with a view to the patient's isolation or removal if he should have another process than endocarditis. Hence we are obliged not alone to consider the probable diagnosis as made from the events, but also to institute an inquiry as to previous vaccination, and possible exposure to some disease within a recent period. There are certain phenomena in a doubtful case which have great weight as the occurrence of embolic processes, as proven by the development of hemiplegia, aphasia, or by the proof of the blocking of an artery of the limbs. These phenomena would not occur in the other types of disease. A heart murmur, if none were known to have previously existed, or if the one previously present has altered in character, taken in conjunction with these phenomena, make the diagnosis of malignant endocarditis as near a certainty as anything in medicine.

A brief sketch of two cases will bring this out in its proper light. One evening, after having spoken upon the subject somewhat dogmatically, a physician asked me to see a case with him which he feared was possibly malignant typhus or variola. The man had been employed as floor-walker in a large department-store, he lived in a boarding-house, and it was desired at as early a date as possible to name his disease. He had previously suffered from rheumatism and had well developed heart murmurs. On inquiry the physician stated that these had altered in quality. In the poor light it was only possible to make out the distribution of the larger extravasations. There existed a very profuse, reddish eruption on the palms of the hands and the soles of the feet which was slightly nodular. The man was semicomatose. The conjunctivæ, neck, and body showed hemorrhages, but the skin of the legs and forearms were almost free. He had a mark of vaccination. No variola was prevailing in the city. He had only been ill for three days and had high fever. Typhus fever had never presented itself in this aspect and these points seemed to justify the exclusion of variola, hence a diagnosis of ulcerative endocarditis was made. In this instance the appearance in the daylight was far better for diagnosis than that at night. The autopsy made a day later showed the disease to have been attended by as profuse internal hemorrhages and embolic processes as on the exterior. A careful questioning failed to prove the point of entrance of the germs productive of the disease.

The second case occurred in a young lady who had chronic valvular disease, the result of rheumatism. She had a week previously suffered from a profuse epistaxis, which had required plugging of the nares for its arrest. The plug had been allowed to remain several days. The young lady's family were not alarmed at her condition until the day of my visit. She had complained of pains and fever, and now had become somnolent. When seen, she lay in a dark middle room, was comatose without stertor, had a loud mitral murmur, altered in character, according to her physician, with a rectal temperature of 106° F., and a pulse of 130. I was unable to make out positively the diagnosis of ulcerative endocarditis because it was impossible to determine in the light at hand the presence of petechiæ. Seen the next morning she presented these abundantly over the body, neck, face, and on the conjunctivæ, her coma had deepened, and the rectal temperature was 107° F. She died on the evening of the second day after the serious symptoms developed. In this case I think we may justly claim that the place of entry of the germs was from the nasal mucous membrane.

The most difficult of the acute cases to recognize are those in which no heart murmur exists, or where the lesion is on the right side, and the secondary effects are in the lungs more especially. In the former we are apt to be thrown off our guard; yet by paying attention to the previous noted study of petechiæ, especially if combined with irregular nervous phenomena, we may make a correct diagnosis. In the latter the danger is of mistaking the pulmonary lesion for primary. Yet it must require a very close analysis to determine whether the pulmonary phenomena antedate the cardiac lesion, or, on the other hand, the endocarditis is the result of pneumonia, as may happen.

Acute yellow atrophy of the liver was supposed to exist in one case though there was only the fever, petechial eruption, and the typhoid state, delirium, and unconsciousness to suggest it, while in favor of the ulcerative endocarditis were the normal size of the liver, not diminishing under observation, and a plainly distinguished heart murmur. The jaundice was found to be associated with an embolus in the hepatic artery. At times it has been extremely difficult to establish a diagnosis of endocarditis as opposed to a continued fever. This will happen especially in hospitals where patients are admitted in the middle course of the disease, who have a slight murmur at the mitral, about whose past history there is no knowledge as regards the previous presence or absence of such murmur. With the newer means of examination fewer errors of this kind are likely to happen, for with the Widal test, the culture of the feces, and a leucocyte count we will, if chance be given for continued study, arrive at the approximate truth. But it is an interesting question whether certain of the cases in literature quoted as establishing the succeedence of malignant endocarditis to variola, typhoid fever, etc., may not have been dependent upon the post-mortem findings, added, whether rightly or not, to the ante mortem diagnosis. More chances of mistake for malaria exist in my experience in two types. The first includes those cases in which a chill, fever, and sweat occur with tolerable regularity, yet neither plasmodia can be found in the blood, nor does the disease yield to quinin. I had a very marked example of this type coming to my office for a number of days. The periodicity was well-marked, the temperature on several occasions reaching 104° to 105° F. in the office. Daily examinations failed to show plasmodia, a leucocytosis was present, and quinin in different forms failed to relieve. Finally the patient developed a pulmonic systolic, and later a pulmonic insufficiency murmur. In this person there had been a gonorrhea when, ten weeks prior to other symptoms

certain joint pains occurred, followed by this intermittent fever. With the development of the heart murmur I felt that it was wrong to have him take a long trip daily to my office and advised him to enter a hospital. He was admitted to St. Luke's, where, after a serious illness, fever, pulmonary complications, and nephritis, he made a recovery. He is the only illustration of this termination in cases in which I have felt forced to a diagnosis of malignant endocarditis. I have also met one case long considered and treated for intermittent fever in a hospital prior to the days of plasmodial examinations in which the autopsy showed ulcerative endarteritis with vegetations on the first portion of the aorta.

The form which more commonly leads to the diagnosis of malaria is the chronic type, where for weeks and months the only phenomena are daily fever and gradual exhaustion. At times embolism occurs so that help is given in establishing the diagnosis by that event. The failure of quinin to produce a cure soon leads to a change of opinion and either tuberculosis or sepsis from some hidden abscess is considered the cause of the sickness. In all cases of this kind where a heart murmur exists endocarditis should be considered as the probable cause of the fever unless definite trouble can be found elsewhere. I have two cases at the present time, one of which has lasted over a year and the other for five months, where search as I may no proof of other cause for a fever can be found than to consider it endocardial. We can, of course, in some cases be helped not alone by the blood-count but also by the blood-culture, providing it is carefully performed. Formerly with simple skin pricks the chances of mistake were too great. Yet when we have obtained a positive result will it materially aid our therapeutics? It has been difficult to have the serum used, and yet in the two cases where I recommended its employment in endocarditis no positive good result followed. I have tried varied remedies without avail and have of late, in despair at the hopelessness of the picture, determined to obtain the germ from the blood, and apply serum-therapy accordingly when possible. My present position is but one patient recovered and that followed gonorrhea.

The disease seems to me to be on the increase, for within the past year eight cases have been observed either of the subacute or chronic type. In two cases gonorrhea was the probable cause, but in the remainder it was not possible to locate or name the point of departure of the disease. I questioned the people, their physicians and friends in vain.

A few words might have been devoted to the discrimination from tuberculosis but the rules are sufficiently known. The chronic cases are in my experience very generally considered to be tubercular though in the absence of physical signs the pendulum swings usually from malaria to tuberculosis.

## THE CLASS METHOD OF GYMNASTIC TREATMENT OF LATERAL CURVATURE OF THE SPINE.[1]

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THIS paper is a review of the work and results obtained in the lateral-curvature clinic at the New York Hospital for Ruptured and Crippled during the last year and a half. I shall hope to show that, although the individual application of exercise, whether heavy or light, is more accurate and effective than group work, the latter is not only a valuable aid in bettering the condition of even the worst cases of scoliosis, but may alone cure the milder forms.

The surgeon's aim in the treatment of lateral curvature should be the development of the patient's physique to as high a degree of efficiency as possible. Believing that the employment of such measures as increase the functional activity of the entire motor apparatus—nerve mechanism and muscular mechanism—is the most rational and scientific procedure in the majority of cases, the problem on undertaking the dispensary work was how to apply the exercise treatment to the many patients presenting widely varying conditions.

The symptom of pain is found in comparatively few cases. But in some it is very real and intense, and seems to be of two varieties, etiologically considered: The rheumatoid pain, found more frequently in early cases with purely postural deformity, and due to the continual dragging on poorly nourished and poorly developed muscles; and the neuralgic type, more apt to be found in old fixed cases, and caused by pressure on the intercostal nerves by the infolded and retracted ribs of the concave side. Relief is sought and should be given in either case. A carefully fitted and applied Knight or other brace, or plaster-of-Paris jacket, will accomplish this in most cases; but the best are burdensome and hamper the motions of the body; in a word, they limit the actions of the working apparatus. But the majority of patients, whether in private or dispensary practice, do not come to the orthopedist because of pain. "Her shoulder is getting higher," "the hip is growing out," "her dress don't fit her well," "she stands and sits so

[1] Read at the Thirteenth Annual Meeting of the American Orthopedic Association, held at New York, May 31, June 1 and 2, 1899.

crooked"—there is a recognized asymmetry, and the surgeon is asked to remove it. Dypsnea and cardiac embarrassment may be present in late cases and require careful treatment.

The record of the seventeen months ending May 1, 1899, shows 199 cases examined. The ages of the patients have varied from four and one half to twenty-four years, the greatest number being from eleven to sixteen years old. Ninety-three per cent. were girls. Four were colored. Under hereditary conditions it was noted that in 15 cases a similar deformity had been present in one or more near relatives; in 8, some tubercular history; in 5, cardiac, and in 3 nervous system complications were present in the family, and one was a twin, the sister being much stronger than the patient presented. An early history of measles was recorded in 126 cases, of scarlet fever in 48, and of diphtheria in 43. Other forms of previous disease were pneumonia, 7; empyema, 3; paralysis, 3; chorea, 17; meningitis, 3, and rickets, 10—although evidences of the last disorder were found to exist in a far greater number of cases. The occupation varied with the age. Thus, the great majority—141 out of 199—were at school about six hours every day; 9 were factory employees; 6 held clerical positions; 6 were dressmakers; 3 domestics; 2 children's nurses; 1 cooper; 1 devoting his time to violin study, and 30 living at home with no very definite occupation—all leading more or less sedentary lives. Indeed, with but few exceptions, it was found that they were, and had been for some years, less active than those about them. They did not enjoy exercise, and often they were distinctly discouraged in it by their parents.

At the time of the onset of the deformity the increase in height had been so marked in thirty-five cases as to lead to the belief that a rapid increase of bone lengths without a corresponding increase of girth measurements—comparative muscle atrophy, if I may so say—was in itself a not infrequent cause of curvature. Certain habits of posture were carefully looked into, and it was found that (1) the carrying of heavy weights, books, or a baby brother or sister on one side more than the other; (2) the unequal distribution of the weight of the body while standing; and (3) asymmetrical positions at desk or other work, one or all of them, were either observed or easily elicited in the great majority of cases. There was a great inability on the part of parents in any way to account for the conditions found. This is to be explained by their ignorance and lack of observance of their children. But a fall or other injury to one side of the body was traceable in twelve cases and astigmatism in two. The effect of an injury in initiating a curvature I would explain by the profound impression made on the child in the necessity to limit movement on that side, partly conscious at first, and afterwards becoming habitual. Unequal vision, a well recognized cause of curvature, I believe, to exist in many more cases than those noted. Certain less common, but easily traceable causes, were recorded. These included, actual difference of more than half an inch in length of lower extremities, in 8; marked contraction of one side of the chest from excision of one or more ribs, 3; torticollis, 2; partially ankylosed elbow-joint in semiflexed position from contracting cicatrix, 1; unilateral spastic contraction of pectoralis major, 1; old dislocation of shoulder-joint, 1; talipes varus in girl of fifteen, 1.

Decided difficulty was experienced in ascertaining the time of onset, hence the duration of the deformity. Previous treatment had been given in 168 cases, and included corsets with the purpose of "straightening her," in 135 patients; a special brace, 16; plaster of Paris jacket, 3; electricity, 1; and some form of gymnastics, 13.

The general examination of the patients showed headaches to be present in 7 cases, localized pain in 39, marked dyspnea in 1, leucorrhea in 5, dysmenorrhea in 4, general rheumatism in 1; also a decided heart lesion in 9, anemia in 9, and mental deficiency in 3.

The forms of curvature were classified as follows: Posterior curvature only, *i. e.*, round shoulders, abducted scapulæ, etc., 35; posterior curvature most marked, but with some lateral deviation, 17; single lateral curve to the right, 7; single lateral curve to the left, 21. *Compound. Right dorsal, left lumbar:* First degree, purely postural, no rotation, 32; second degree, rotation present, 58; third degree, rotation fixed, 22; total, 112. *Compound. Left dorsal, right lumbar:* First degree, postural and no rotation, 1; second degree, rotation present, 4; third degree, rotation fixed, 2; total, 7.

That is to say, that of 199 patients examined, a little less than half had postural asymmetries, or those which they could by will power or by suggestion entirely overcome, and a little more than half were affiicted with deformities more or less fixed and beyond the control of their motor apparatus.

The treatment followed has aimed through class work almost exclusively for the first type just mentioned, and through class work supplemented by frequent individual suggestion and exercises in the second type, so to increase the size of the muscles and train the motor apparatus, that they will retain or more easily approximate the ideal position.

Patients presented themselves at all times of the year, although it was observed that there was an in-

crease of school children during the early months of the fall, and an increase during the spring of the older working people. This stringing along of the patients, and the fact that no one so far has been refused treatment were practical difficulties in the class method, which it is proposed to obviate in the future by starting a new class every two months and commencing only individual work at once, where that is thought desirable. This would include an extra physical examination of all under treatment just before the new class commenced to determine (1) who should be discharged as cured; (2) who should be advanced to a class having more difficult work; (3) who should remain where they are, and (4) who, having had a fair trial of perhaps a number of months without improvement, should be dismissed as worthy subjects of a charitable institution whose function is to treat chronic patients —clearly, not the purpose of an out-door dispensary. The question might be asked, Why receive these cases at all if they are incurable—why not dismiss them at first? The answer is that it is impossible to tell results at the time of examination; that many of the worst and apparently most hopeless cases have, through their determination and perseverance, made most marked improvement; while others, with but little deformity, but more listless, and handicapped by poor hygienic and dietary surroundings, have shown but little improvement, and in a very few cases have seemed to become worse.

Treatment is given three afternoons a week, from two until five o'clock, in a large room especially set apart for that purpose. There are now four able assistants, young women who are graduates of leading normal schools of gymnastics in the country, who help, two in the class work and two in the individual work exclusively. After examination and shadowgraph record of the case, the patient is assigned to the proper class and also to his day of special work, if it is necessary to add this. He is instructed to procure a cheap form of gymnasium slippers, and to have loose clothing for the exercise. For the girls, and especially those who are wearing long dresses, the bloomer or gymnasium skirt is strongly recommended, but not insisted upon. This, which it was difficult to get them to start, has now so become the thing that girls will appear in them of their own accord after three or four visits.

When the number coming for treatment became too large to be properly handled in one class—I do not like to have more than twenty-five together, and prefer fifteen—division was first made on the basis of variety of curvature, irrespective of age or intelligence. But this was found to be unsatisfactory, because the method of instruction and degree of efficiency possible in a child of eleven would distinctly hinder the progress of a girl of fifteen, and it was soon recognized that much of the kind of work which was beneficial for purely postural deformities was equally valuable for partially fixed cases. So division has been made into three classes about as follows:

Class I, children and those just past puberty, who are beginning treatment; Class II., children who still require more treatment after they have obtained sufficient ability and understanding of their exercise to advance them to work with the older girls, and all older girls or boys who are beginning treatment; and Class III, made up of all, but especially the cases of greater deformity, who, having acquired a proper degree of general muscular development, are given harder work. This class, which, in its present personnel, I have the pleasure of demonstrating at this convention,[1] have had a general development which has changed several of them from sickly, anemic, and deformed patients into healthy and more or less robust boys and girls who, if they have not eliminated all trace of their curvatures, are at least better able to bear the burdens of life free from the reasonable fear that their deformity will increase. I do not know of any treatment other than systematic exercise which will accomplish this. This class I consider fit subjects for heavy apparatus work.

An adaptation of Swedish Educational Gymnastics is the form used. In the system of Ling, as many of you know, the "day's order" is divided into eleven forms of exercise, to include all portions of the body, and so arranged as to vary with consecutive lessons, according to a logical progression of difficulty of performance and requirements of previous training of heart and lungs, as well as of the general motor apparatus. This system was chosen because: (1) it was believed to be conducive to the greatest accuracy of position, (2) by the use of command more than demonstration of exercise, the conscious assumption of correct positions, trains the nervous system clear back to the highest intellectual centers, and (3) in its method of neuromuscular training by means of forced position holding, rather than by continuous rhythmic motion, the surgeon is enabled to correct any faulty position at once. Soon after the work was begun an additional practical reason for its use was found in the adoption in the New York Public Schools of Swedish educational gymnastics, so that those patients who were fortunate enough to be in a school where a little exercise had been crowded into the course,

[1] A class of twenty-five was presented at the Hospital for Ruptured and Crippled.

were already acquainted with something of the commands used.

The class work is entirely without apparatus. The bare-floor space and the employment of pure body mechanism, bone and joint leverage is all that is depended upon for resistance to muscular action. It must be remembered that much of the light dumbbell and Indian-club drill now in vogue tends to develop the arms and forearms out of proportion to the trunk; but trunk development is what we seek, and the weight of the head and of the extremities forms all of the *weight-arm* resistance required, when the body is placed in appropriate positions. It should not be inferred, however, that the use of horizontal bars, rings, and of the heavy lifting weights that Teschner advocates are not conducive to good, and even more rapid, results, after fundamental posture-concepts have been acquired by the patients. In private practice we can oversee each motion made. But the individual supervision required of the surgeon makes it inapplicable to group work.

The actual make-up of the drill will vary day by day according to the principles of progression above alluded to, but follow strictly the same sequence as to kind of exercises. Thus, after a few quick arm and leg movements to stimulate attention, a formal exercise to increase all diameters of the thorax by overextension of the upper spine is given in various ways. After this come forcible arm thrustings to act upon the muscles with vertebro-scapular attachments. Then come balancing exercises to train the coordination of the muscles about the hip, knee, and ankle, and incidentally of the lower back. After this, the muscles of the lower dorsal and the lumbar regions receive particular attention. Stress is laid upon this variety of exercise, and progression is made as rapidly and accurately as possible. Exercises for the abdominal muscles follow. These are found to constitute a valuable therapeutic agent in overcoming the slouching postural lordoses so commonly associated with round shoulders and even with kypho-scoliosis. In lateral trunk flexions, the danger of increasing the curve mechanically by bending to the wrong side is overcome by noting for each patient, at the time of examination, which side-bending tended to improve the curve, and by placing her accordingly in one or the other line in the class, where she soons learns to bend to her own side only. A little brisk marching, or a run and a deep respiratory movement, last of all, leaves the patient with a general sense of well being, and the treatment is over for the day. One class averages from thirty to forty minutes. Allowing five or ten minutes between classes for the change of clothes, three classes and the individual work are completed in two and one-half hours, and all the patients are treated at each time.

Every exercise and every position thus assured, attains as nearly as possible a typical perfection, but particular stress is laid upon the pose of the back and chest. To maintain a given posture absolutely, the entire attention must be concentrated upon the parts so held, especially when this posture is unusual, and anything which diverts the attention weakens the control. One authority has said that the movement of an eyelid affected the posture of the body. These positions oft assumed become habitual because the entire mechanism controling them has been changed. Possibly the physiologists may one day prove to us that these underlying nerve changes, as well as the muscle changes, are entirely organic, and have an anatomic basis.

Of the 199 patients examined during the time mentioned, 44 have found it impracticable to take the gymnastic treatment, leaving 155 who have had this treatment. Of these the greater number, 115, have had class work only, while 40 have had both class and individual work.

The length of time given to treatment varies, but it is found that the simpler postural cases have required from two to five months, and the severe ones six months to a year, before it is possible to say that they have passed the place where it is reasonable to expect that the deformity will not become worse. It is not thought desirable to keep them longer than a year.

It is difficult to state results accurately because the patients often simply stop coming without giving the surgeon an opportunity to finally examine them.

But the following may be stated of the 155 reated: Thirty have been definitely discharged—15 as cured, 14 as much improved, and one unimproved, because insubordinate. Fifty-two have discontinued coming to the clinic, and later enteries show in their histories, 44 cases improving, 4 not yet improved, and of the remaining 4, no entries. Seventy-three of the 155 might still be considered as under treatment, though but little more than half that number are regular. Thus, out of 82 patients who are no longer under treatment, 73 are known to have been cured or improved.

*Summary.*—1. Varying conditions among curvature cases do not prevent efficient work in groups of fifteen to twenty-five, but a gradation according to age and ability to work is necessary when many patients are treated.

2. The class method ensures the treatment of many more patients than would be possible by individual supervision of exercise.

3. The Swedish educational gymnastics is used because well adapted for these three objects: (*a*) To isolate activity in groups of muscles; (*b*) the immediate and effective correction of faulty positions; and (*c*) the development of intelligent and purposeful cooperation of the patient.

4. Nearly all of those who faithfully pursue the treatment show marked improvement.

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## THE ETIOLOGY OF YELLOW FEVER.[1]

ABSTRACT OF THE REPORT OF THE COMMISSION OF MEDICAL OFFICERS, MARINE-HOSPITAL SERVICE, DETAILED BY AUTHORITY OF THE PRESIDENT TO INVESTIGATE THE CAUSE OF YELLOW FEVER.

THIS report embodies the work of the Commission in fairly testing the claim of Professor Sanarelli of Bologna, Italy, that the bacillus icteroides is the cause of yellow fever, and the conclusion is drawn that this famous scientist has isolated the true cause of the terrible scourge.

This conclusion is based upon a careful bacteriologic study, in the well-equipped laboratory of the Marine-Hospital Service in Havana, Cuba, of twenty-two cases of disease thought to be yellow fever by the native physicians in attendancc. Of these patients all were seen during the progress of the disease, and in fourteen of them the Commission concurred in the diagnosis. Each case was the subject of careful bacteriologic study before, and, if practicable, after death. This consisted in the abstraction of blood in sterile bulb-tubes from the ear tip under careful asepsis. This blood was then diluted in the bulbs with meat-peptone bouillon, and after an incubation of twenty-four hours the growth was transplanted to fresh tubes of bouillon, from which, after twenty-four hours, Petri plates were made in series. From these the organisms present in the blood were isolated in pure cultures, and studied. After isolation each organism was subjected to cultural examination on all media, by means of which those meeting the demands of Sanarelli for the organism he discovered were readily selected and their pathogenicity for animals established.

Of the fourteen cases diagnosed as yellow fever, the Commission isolated the organism of Sanarelli, the bacillus icteroides, from thirteen, and in the patient in whom this organism escaped the observation of the Commission it was isolated by an independent observer for whom tube cultures had been taken at an autopsy conducted by the Commission. Thus the even percentage of isolation has been obtained in these fourteen cases, all of which presented prominent symptoms of the disease. In the cases not thus diagnosed the organism of Sanarelli was not obtained. From the living blood of twelve of the fourteen patients, abstracted not earlier than the third day of the disease, the organism was isolated, and in the two others it was obtained post-mortem.

The Commission, having preserved a number of cultures made at the Isolation Hospital in the City of New Orleans from patients seen during the epidemic of 1897, also isolated therefrom the bacillus icteroides in the proportion of 83.33 per cent. of the cases examined, the cultures having been made at autopsy. Thus the identity of the bacillus icteroides of our Southern States, with that found in Cuba, and that sent the Commission by Professor Sanarelli, which was obtained in South America, was established.

As a control to these examinations the Commission made use of a number of patients suffering from diseases other than yellow fever, from whom the blood, extracted in the same manner and treated in the same way, failed to yield any organism at all comparable to Sanarelli's. These diseases were representive of those usual to the City of Havana, and were seen during the same period of time in which the cases of yellow fever were under observation.

Also there were thirty-one dead bodies examined, bodies dead from known and unknown diseases, many of them in the city morgue, the most of them in the Spanish military hospitals. In each instance careful section was made and the blood from the heart, from the liver, the spleen, and the kidneys, urine, and feces, planted directly in bouillon or upon agar-agar slant tubes, from which cultures series of plates were made. All bodies thus examined, at times many hours after death, yielded colonies of various organisms, save one, and this at the time of autopsy was diagnosed pathologically as yellow fever, and was sterile.

In none of these cases of comparative autopsic examination was the bacillus icteroides found; neither in their blood, nor urine, nor feces. Therefore, the Commission assumes that the organism of Sanarelli is found only in bodies sick with or dead from the disease—yellow fever, at the same time conceding that in many of the sick the blood does not yield the germ, and that in the dead it may prove absent only under certain conditions.

Coincident with the above observations the Commission carried on the study of the natural history of the organism as to its mode of entering the body, its colonization therein, its toxic possibilities, and its distribution in the organs post-mortem.

[1] Under date of November 8, 1897, Passed-Assistant Surgeon (now Surgeon) Eugene Wasdin and Passed-Assistant Surgeon H. D. Geddings were detailed by authority of the Secretary of the Treasury and the President as a Commission to investigate in Havana the nature of yellow fever. Their full report, dated July 10, 1899, has been received and is printed as a separate publication.

Numerous and interesting experiments were made with animals, the Commission finding all the animals at its command, such as mice, rats, dogs, cats, guinea-pigs, rabbits, and monkeys, quite susceptible to the artificial infections produced by inoculating them under the skin, intraperitoneally and endovenously. At the same time it became convinced that the same, or very similar results were obtainable by the use of other organisms of different kinds. It found, as had been claimed by Sternberg, that similar clinical and anatomical results could be found after the artificial administration of the bacillus *x*, as well as that of Havelburg, and of the bacillus coli communis, all of which proved, when artificially exhibited, very pathogenic to all animals; and autopsies upon these revealed similar conditions in the organs. Moreover the toxins elaborated *in vitro* by the above-named organisms, *x*, Havelburg, and coli communis, and icteroides, were precipitated, purified, and tested comparatively upon animals, with the result that the Commission decided that the *mode of death* from these toxins, when injected into animals, *was the same in kind*, and that the toxins differed only in intensity, and that of them the bacillus icteroides was the most potent.

From these facts the Commission, early in their work, became convinced that the claim of Professor Sanarelli, of having discovered the germ of yellow fever, was not established by any evidence presented in his published works, and that it was not tenable so long as it could be claimed that the bacillus of Havelburg and the bacillus *x* of Sternberg produced the same pathological conditions when artificially inoculated, and the Commission recognized the validity of this claim, in view of the facts given above, although it had for a long time recognized both of these organisms as belonging to the colon group.

At this stage of its work the solution of the problem seemed very remote, but before turning to some other and unknown cause of this disease it was determined to place experimental animals under *natural conditions of infection*, since it was recognized that all preceding experimental work was so artificial that it was impossible for the Commission to judge of the pathogenic, or rather *specific* merits of the three prominent organisms. From this animal experimentation the Commission proves the *natural specificity* of the organism of Sanarelli, the absolute *innocuousness* of the bacillus coli communis, of the bacillus *x*, and of the bacillus Havelburg, to even the most susceptible of animals; and a marked degree of similarity in the reaction of these animals (mice) to the *acute infectious organisms*, such as bacillus typhosus and bacillus cholera suis, when exhibited to them naturally. The Sanarelli organism is thus eliminated from the colon group and associated with the acute infectious organisms.

The Commission recognized that Sanarelli's claim was *only* one of *pathogenicity* and not of *specificity*; that until such demonstration of specificity there could be no *valid* claim for his organism. This validity the Commission believes to be established by the conclusion that the bacillus icteroides is "naturally infectious to animals, the degree varying with the species. In some rodents local infection is most quickly followed by blood infection, while in rabbits and dogs there is no evidence of this subsequent invasion of the blood, monkeys react to the infection the same as man does."

The Commission has determined "that the infection takes place by way of the *respiratory tract*," and that the primary colonization in the lungs is responsible for the first evidences of absorptive intoxication such as fever, pains, etc., characteristic of the disease. Also that this primary colonization in the lungs and its toxic symptoms may constitute the *entire attack* of the disease in many instances, an attack so light, so ephemeral, that even the most expert diagnosticians may not differentiate them from other ephemera, or poorly marked attacks of allied diseases, as for instance, *dengue*. Moreover, the conclusion has been reached that what is known in the literature of yellow fever as the "reactionary fever," the "secondary infection" (from micro-organisms normal to the body), and the "secondary paroxysm," is due to the passage of the infecting germ, the bacillus icteroides, from its primary colony in the lungs into the general circulation, thus producing the "secondary paroxysm" so familiar clinically in all marked cases, unless they are of the *siderant* type. This "secondary paroxysm" is then a septicemic one, and it depends not upon the bacillus communis, or bacillus proteus, or upon the micro-cocci, but upon the further colonization of the specific organism in the blood, thus bearing out Paget's observation that the "*decline*" *of the fever* the true "secondary paroxysm," is as *specific* as the "rise" or the primary attack. The Commission recognizes the coincident invasion of the blood by the organisms of the respiratory tract, as of possible, it may be frequent, occurrence, among which are found colon and proteus; or these may invade from the alimentary canal "during the last hours of life," when the mucosa becomes impaired from stasis, such mixed septicemia being of the most severe type and frequently fatal.

The Commission, therefore, differs entirely from Professor Sanarelli in his theory that yellow fever is primarily a septicemia. Indeed, it can scarcely be a matter of surprise that Sanarelli formulated this

opinion seeing that he always produced, with (as he thought) unimportant exceptions, *artificial infections* by internal inoculations, which perforce must have produced septicemia. Those cases not open to such explanation, which he observed in man, he explained in a still more unsatisfactory way; in fact by the assumption that the germ elected to hide away in the spleen in small numbers during the *whole course* of the disease, only to come suddenly forth and produce a septicemia at its termination. The Commission, therefore, concludes that the theory of Sanarelli in this regard is not sustained by the facts of these cases, and offers the above probable solution of the most widely and generally observed characteristic of yellow fever, the "secondary paroxysm" characterized by a septicemia.

The theory formulated and expressed by Dr. Sternberg, U. S. A., that the "germinal principle" in yellow fever is to be looked for in the alimentary tract, an opinion evidently dependent upon the well-known influence of the disease upon the organs adjacent and contributive to this tract and portions of the tract itself, as the duodenum, has been found untenable by the Commission, since there is no record of any one ever having isolated the specific germ from this canal save in the case of its presence there through some capillary hemorrhage into its lumen.

The influence of the various disinfecting agents upon the bacillus icteroides has been studied by the Commission with an eye to the practical advantages to be derived from a better acquaintance with the organism, and it is found that the organism is readily influenced by the mechanical and chemical agents in ordinary use. Cold, however, is not a factor in this process, for the organism resists the most extensive refrigeration, and no reliance can be placed on this mode of disinfection. On the other hand, the organism is very susceptible to dehydration and cannot withstand artificial drying for more than ten or twelve days, and it is very probable that its susceptibility to *frost* is due to the lessened humidity of the atmosphere at such seasons rather than to the degree of cold experienced. Sunlight is very fatal to this organism and, no doubt, is more so if the organism has lost its vitality through evaporation of its fluids as in a frosty atmosphere.

The resemblance between the bacillus icteroides in its behavior on certain media and the bacillus of hog cholera has been brought to the attention of the Commission, and it has deemed the observation that there is a possible similarity in the pathogenicity of the two organisms in the domestic hog of great importance, although its experience in the observation of the cultural similarities leads to the conclusion that they are culturally distinct; while the infection of the domestic hog, in its experience, is impossible by the method pursued of feeding the bacillus icteroides to them. However, the question being of too much importance to be determined without full data, the Commission placed under treatment a number of domestic hogs, in an environment free from suspicion of the possibility of any contamination with the bacillus choleræ suis, with a view to deciding the question of the reaction of these animals to the bacillus icteroides, administered to them in pure cultures in their food. These experiments were conducted at the United States Quarantine Station at Delaware Breakwater and therefrom it is deduced: first, that the domestic pig is incapable of infection from the bacillus icteroides when introduced through the intestinal or digestive tract; and second, that the bacillus icteroides when fed to pigs will not produce any of the lesions or intestinal symptoms of hog cholera.

### CONCLUSIONS OF THE COMMISSION.

1. That the micro-organism discovered by Professor Giuseppe Sanarelli, of the University of Bologna, Italy, and by him named "bacillus icteroides," is the cause of yellow fever.

2. That yellow fever is naturally infectious to certain animals, the degree varying with the species; that in some rodents local infection is very quickly followed by blood-infection; and that while in dogs and rabbits there is no evidence of this subsequent invasion of the blood monkeys react to the infection the same as man.

3. That infection takes place by way of the respiratory tract, the primary colonization in this tract giving rise to the earlier manifestations of the disease.

4. That in many cases of the disease, probably a majority, the primary infection, or colonization in the lungs, is followed by a "secondary infection" or a secondary colonization of this organism in the blood of the patient. This secondary infection may be complicated by the coinstantaneous passage of other organisms into the blood, or this complication may arise during the last hours of life.

5. That there is no evidence to support the theory advanced by Professor Sanarelli that this disease is primarily a septicemia, inasmuch as cases do occur in which the bacillus icteroides cannot be found in the blood, or organs in which it might be deposited therefrom.

6. That there exists no causal relationship between the bacillus "*x*" of Sternberg and this highly infectious disease; and that the bacillus "*x*" is frequently found in the intestinal contents of normal animals

and of man, as well as in the urine and the bronchial secretion.

7. That, so far as the Commission is aware, the bacillus icteroides has never been found in anybody other than one infected with yellow fever; and that whatever may be the cultural similarities between this and other micro-organisms it is characterized by a specificity which is distinctive.

8. That the bacillus icteroides is very susceptible to the influence injurious to bacterial life; and that its ready control by the processes of disinfection, chemical and mechanical, is assured.

9. That the bacillus icteroides produces *in vitro*, as well as *in vita*, a toxin of the most marked potency; and that, from our present knowledge, there exists a reasonable possibility of the ultimate production of an anti-serum more potent than that of Professor Sanarelli.

## CLINICAL MEMORANDUM.

### *SUBCUTANEOUS EMPHYSEMA OCCURRING DURING THE ACT OF VOMITING.*

By A. W. DUNNING, M.D.,
of St. Paul, Minn.

Mrs. C., a married woman, aged twenty-eight years, has always been in good health, has had no severe illness, and so far as is now discovered is free from tuberculosis or other pulmonary or bronchial affection. Has one child two years old, and is now four and a half months pregnant. During the early part of the present pregnancy she was troubled very much with nausea and frequent attacks of very severe retching. On May 2d, when three-months' advanced, she experienced one of these attacks, felt a sharp pain in the left side of the neck just external to the lower portion of the sterno-cleidomastoid muscle, and immediately following it there appeared an enormous swelling covering the entire side of the neck. When I was called to attend her a few hours later the neck had the appearance of a very much exaggerated case of adenitis, but on palpation it was discovered that the swelling was entirely emphysematous. By the following day it had become diffused so that crepitation could be distinctly felt over the entire left side of the face to the lower border of the orbit, and down over the clavicle to the anterior angle of the axilla. It also extended around the neck to the right side of the face (but in a less marked degree), and down the neck nearly to the points of the scapulæ. By the third day the swelling had subsided considerably, but during another attack of severe vomiting it again returned, and was even greater than before. From this time on, however, it gradually subsided, until at the end of ten days it had entirely disappeared. The only inconvenience which she suffered was a burning and uncomfortable sensation over the emphysematous area, and a feeling as though there was a large collection of gas in the stomach. She would ask her friends to strike her a smart blow between the shoulders, when she would immediately "belch wind" and be relieved for a time, when the occurrence would be repeated. For several days a distinct soreness was felt at each act of deglutition at the point where pain was felt at the outset.

I report this case simply because of the unusual occurrence of the phenomenon, never having myself seen or heard of a parallel case. I will not, attempt, however, to offer any explanation of the manner in which this phenomenon was brought about, but will leave that part of it for your consideration.

## MEDICAL PROGRESS.

***Inspection of the Stools.***—Schutz (*Berl. Klin. Woch.*, June 26 and July 10, 1899) thinks that a more careful inspection of the stools passed in intestinal diseases would in many cases give information as to the exact seat of the lesions. The most important consideration is whether or not mucus is present. A small amount may be physiological, as that which coats hard fecal lumps. Mucus with constipated stools indicates catarrh of the large intestine. To determine from the mucus in diarrheal stools whether enteritis exists, or there is simply a dyspeptic diarrhea, is a more difficult matter. Evacuation of pure mucus without feces, and consolidation of mucus about small fecal masses, means catarrh of the lowest portion of the intestine. An intimate mixing of mucus and feces indicates an involvement of the upper part of the large intestine or of the small intestine. The presence of undigested muscle fibers, or starch granules, associated with mucus without fever, indicates disease of the small intestine. Besides these general laws, one may draw valuable conclusions from the consistence, amount, color, and smell of the mucus. In certain cases simple microscopical or chemical examinations will be necessary to determine the presence of blood, pus, bile, etc.

***Why Does the Surgeon Fail to Find the Appendix?***—Scott (*Bull. Cleveland Gen. Hosp.*, April, 1899) asks this question, and in order to answer it he wrote to most of the surgeons and anatomists of the United States. From the replies received as well as from a study of the literature he states that he has collected data representing 10,000 operative cases and an equal number of examinations of cadavers. In no less than twenty-nine (29) instances did the surgeon, recognized as a capable one, fail to find the appendix, although the operation was performed in the interval, whereas only five (5) times among the 10,000 observations upon the cadaver was the appendix wanting. In no one of the latter cases, however, was the examination so thorough as to absolutely prove the congenital absence of the appendix. How, then, explain the great discrepancy between the records of the surgeon and those of the anatomist? He had a case of appendicitis obliterans totalis occurring in his own practice, in which the appendix was so small and so closely bound down to the posterior abdominal wall that he would not have discovered it had it not been for an enlarged lymphatic gland which lay close beside it. Ap-

pendicitis obliterans totalis seems to him to offer a scientific explanation of the discrepancy between the observations of the surgeon and the anatomist. Obviously the former is lacking in his opportunities for making a thorough search in his care for the life of the patient. The literature records no case which is not more practically explained on this hypothesis than on the supposition of the congenital absence of the appendix.

***The Origin of Pain in Gall-Stone Colic.***—BERTELSMANN (*Mün. Med. Woch.*, June 20 and 27, 1899), after careful investigation of the above subject, comes to the conclusion that true colic of the gall-bladder may occur without inflammation and without obstruction. Inflammation may be the first cause of colic by stimulating the bladder to contractions. It may, however, merely accompany the same. Inflammation increases tremendously the pain caused by contraction, but contraction alone may also give colic. While admitting that colic in most cases is accompanied by inflammation the author repeats his firm belief that it may occur in a severe form without it.

***Four Cases of Infantile Monstrosity in the Same Family.***—HESTLE (*Va. Med. Semi-Monthly*, June 23, 1899) relates the following interesting and peculiar history: A mulatto girl, healthy and well-formed, was married to a strong, healthy negro, aged twenty-five. Her first child was stillborn at about the seventh month. It was a male and had neither arms nor legs nor auricular appendages. The hands and feet were well developed and attached immediately to the well-developed body. The following year she was delivered of a normal, healthy, female child. The third birth was of the same character. At the fourth, fifth, and sixth labors she gave birth to monsters exactly like the one at the first labor. They were all males, and the arms, legs, and auricular appendages were in each instance absent, the hands and feet being attached to the body. About the third month of the first pregnancy her brother entered her room at midnight with a living opossum, which he threw on her bed, frightening her very badly. From that time on she suffered much uneasiness lest her child should be deformed. Nothing unusual occurred during the remainder of her term. While pregnant with the second and third children she was not frightened at all. During each of the last three pregnancies she was frightened about the third month of gestation by seeing an opossum and she suffered from an almost constant fear that the child would be deformed. This fear was naturally much stronger after she gave birth to the second monster. It is well known that the legs of the opossum are very short and his feet, therefore, close to the trunk, while its auricle is rudimentary and almost invisible on casual inspection. Hestle does not attempt to explain the connection between the fright and the birth of the monsters, but considered the remarkable coincidence as worthy of note.

***The Pathology of Gas-poisoning.***—SMITH (*Brit. Med. Journ.*, April 1, 1899) had opportunity to make exact examination of the blood of five persons who died from gas inhalations. The inspired gas contained about sixteen per cent. of carbonic oxid. The results of examination show, without doubt, that the injurious effects of gas are directly attributable to the action of the carbonic oxid and not to the accompanying poisoning. The carbonic oxid is poisonous on account of it affinity for hemoglobin, this being almost 300 times as great as the affinity of oxygen for hemoglobin. In one case the carbonic-oxid saturation of hemoglobin was found as high as eighty-three per cent. The temperature of the body is an important factor in poisoning by carbonic oxid, and the poisoned person should be warmed as quickly as possible by internal and external means. Sometimes the temperature rises very much just before death and this is an indication that the heat-centers have been injured by the lack of oxygen. If the blood absorbs over thirty per cent. of carbonic oxid, slight muscular efforts, such as walking, produce severe headache, so that the patient reels like a drunken man. The patient should be kept absolutely quiet in order to avoid loss of oxygen. Sometimes the carbonic-oxid intoxication produces convulsions and tetanic spasms sufficient to cause the death of the patient several days after he has been removed from the effects of the gas. Pneumonia may also follow, and cardiac affections may arise to interfere with recovery.

## THERAPEUTIC NOTES.

***Cerebrospinal Meningitis Treated by Lumbar Puncture.***—CUTHBERTSON (*Chicago Medical Recorder*, June, 1899) reports three cases of cerebrospinal meningitis occurring in the First Illinois Cavalry, one of which was treated without lumbar puncture and the patient died, while the other two patients were treated with ice to the head and spine, fly blisters on the neck, $\frac{1}{40}$-grain doses of mercuric bichlorid hypodermically, and lumbar puncture. Consciousness returned some hours after the withdrawal of a dram of cerebrospinal fluid, and though recovery was slow in each case it was complete. One patient's progress was retarded by numerous abscesses which formed at the sites of the hypodermic injections.

***A Chinese Remedy for Amenorrhea.***—HIRTH (*Munch. Med. Woch.*, June 6, 1899) introduced into Germany a remedy for amenorrhea which for more than fifteen centuries has found favor in China in the treatment of female disorders, but especially for amenorrhea and dysmenorrhea. The extract is made from the root of a plant called tang-kui, and as it contains nothing which is poisonous or capable of producing abortion, tests were made of its virtues by MUELLER (*Munch. Med. Woch.*, June 13, 1899) in fourteen cases. In two of these there was no appreciable result. In all of the others, although the medication was combined with hydrotherapy, massage, and the administration of iron, Mueller thought that he could observe the good effect of the drug; that acting as a general tonic, it also brought on the flow at the correct period, besides increasing it and making less severe the premenstrual pain. The refined extract as prepared by Merck is called eumenol.

# The Medical News.

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SATURDAY, AUGUST 26, 1899.


## *THE PLAGUE IN EUROPE.*

CONTRARY to the many apparently trustworthy assurances, of experienced sanitarians and well-known bacteriologists, that the civilized world was safe from all danger of the plague in modern times, and in spite of all the precautions taken against it, the plague has succeeded in finding its way into Europe. The occurrence of bubonic plague at Alexandria under circumstances that made its further spread extremely probable was the first serious shock to these complacent prognostics. Nearly one hundred cases have occurred in that great commercial mart so intimately connected with the civilized world, and the end is not yet. The plague at Oporto proves in a similar way not to be merely the occurrence of a few cases among seafaring people. On the contrary, the disease has obtained a foothold in the town itself. Some cases are reported from Lisbon, and the town of Figueira has developed an outbreak of the disease. Various cities in Spain are said to harbor cases, some of which have proved fatal.

It is to be hoped that these rumors are, to say the least, exaggerations, figments of reportorial imagination during the "dry" season, but the conviction is borne in upon us that the quarantine precautions thus far taken are entirely inadequate. It is interesting to note that the *British Medical Journal* prophesied some time ago that the plague would almost surely reach Europe. The course of the disease in the Far East is not unlike that of epidemics that finally became almost universal. Certain it is that the present spread of the disease is sufficient to arouse the medical world, at least, from its fancied sense of security.

In India where, despite all the sanitary, hygienic, and prophylactic measures that have been taken, it has continued to rage for nearly five years, the plague is now actively spreading at the following places: At Hong Kong, where from thirty to forty deaths and as many new cases are being reported each week. Complaints are heard from Canton of the spread of the disease from the island to the mainland, and the threatened invasion of the city of Canton itself. Plague has existed for some time on the island of Madagascar, and has lately, according to a French official announcement, spread to the neighboring island of Reunion, where over thirty new cases, and nearly as many deaths per week, were reported as occurring at the end of July and the beginning of August. In German East Africa, where Koch reported that he found an endemic focus of the disease two years ago, the disease is raging with great virulence. At Bukota, East Africa, out of a native population of 715, there have been during the past year 467 deaths from plague.

Here in America, notwithstanding the existence of plague at Alexandria and at Oporto, our danger, as we have pointed out before, seems to be rather on our Western coast. The increased commerce of our Western seaports with the East and the existence of plague at so many points make imperative the most thorough and efficient quarantine throughout our Western coast. Europe stands between us and danger from the East; self-preservation must arouse her soon to efficient work.

## *THE LOCAL ERADICATION OF MALARIA.*

WE noted in a recent issue the fact that a party from the Liverpool School of Tropical Medicine, headed by Surgeon-Major Donald Ross, was about

to start for South Africa. The object of the expedition is to demonstrate the feasibility of the local eradication of malaria in some of the South-African villages. Dr. Ross in his inaugural address at the Liverpool School (*British Medical Journal*, July 1, 1899) avers that they have good hope of accomplishing this purpose which if successful will revolutionize the conditions of living in tropical countries.

Dr. Ross has shown that the intermediate host of the malarial hematozoon is the mosquito; not any or all mosquitoes, but a particular genus. The ordinary domestic mosquito, for instance, *culex pipiens*, does not carry malaria. In Dr. Ross' experience it has always been the rarer genus *anopheles* in whose tissues he has been able to demonstrate the malarial parasite. In the mosquitoes of the genus *culex*, though placed under the most favorable conditions for carrying malaria, he has never been able to find traces of the parasite. These observations are confirmed by the results of investigation in Italy, where Grassi, Bignami, and Bastianelli have succeeded in cultivating the germs of human malaria in mosquitoes but always in individuals of the genus *anopheles*.

Now it happens that the breeding-places of *anophelidæ* are stagnant pools usually limited in extent. They never breed successfully where there are minnows since minnows devour the larvæ with avidity. They breed especially in water-tanks, small reservoirs, in puddles, in small undrained swamps where fish never penetrate. Their larvæ were found by Ross in India in tubs and barrels and even in an old abandoned boat. The eradication of their breeding-places ought not to prove a difficult task if seriously and intelligently attempted. Ross admits that to get rid of the ordinary mosquito would be a hopeless undertaking but he considers that the elimination of the malarial bearers from a neighborhood may prove comparatively easy.

The prospect opened up by his observations is certainly encouraging. The means he proposes for the eradication of malaria are comparatively so simple that one is tempted to think that in certain localities of our own country, or in some of the villages of Cuba and Puerto Rico, the plan of draining the small bodies of stagnant water might help in the demonstration of the truth or falsity of his views. Ross himself calls attention to a fact that has often been noted before with regard to the distribution of malaria, namely, that certain, sometimes very limited, parts of a malarial district are much more affected than others. It is evident that narrow local conditions are the cause of this, and Ross' hope as to local eradication of the disease by simple drainage would seem not to be unfounded.

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## MORE LIGHT ON THE PATHOGENY OF YELLOW FEVER.

WE published two weeks ago in our editorial on "Sanarelli and the Pathogenic Rôle of the Bacillus Icteroides" the announcement that the Commission of Medical Officers of the Marine Hospital Service, detailed by authority of the President of the United States to investigate in Havana the nature of yellow fever, had declared that Sanarelli's bacillus icteroides was undoubtedly the cause of the disease. The information came to us through Sanarelli himself, with whom the officials of the Marine Hospital Service had been in communication, and anticipated all publication of the Commission's results in this country. We are glad, however, to be able to present our readers this week with the details of the Commission's report as it contains statements of great interest.

There seems to be little room for doubt as to the pathogeneity of the bacillus icteroides in yellow fever after reading the account of the observations made by the Commission. In every one of fourteen cases diagnosed clinically as yellow fever the microorganism described by Sanarelli was isolated. It was not found in a single case of illness that had not the clinical symptoms of yellow fever, though it was looked for in a number of cases. Culture observations and experiments show that the bacillus isolated from yellow-fever cases in Cuba is the same as that found in yellow fever in New Orleans and in Brazil. The identity of the disease in all these places is absolutely determined.

The Commission announces definitely its opinion that the infection of yellow fever takes place through the lungs. This conclusion will come, we think, as a matter for distinct surprise even to those most familiar with the disease. Gastro-intestinal and hepatic symptoms so crowd the field of vision in severe cases of the disease that the prevailing impression that yellow-fever organisms began and ran

their course in the digestive tract was most natural, and has been the accepted theory.

In following the literature of yellow fever in South-American countries we have pointed out the fact, noted first in Brazil, that it was especially among molds that the bacillus icteroides grew most luxuriently. Last week we quoted some further work of Dr. de Lacerda on this subject with Sanarelli's Comments, that this symbiosis with molds would serve readily to explain the fact, now pretty effectually established and generally admitted, that yellow fever can be an air-borne disease. Primary infection through the respiratory tract becomes still easier to understand under these conditions.

The work of the Commission is especially interesting in its relation to the claims made by Dr. Caldas, a correspondent in Brazil, from whom we print, in this issue, a letter with an abstract of a report made by him to the Academy of Medicine in Rio Janeiro. The United States Commission found that as regards most features of their pathogeneity for animals it was impossible to distinguish from one another, Sternberg's bacillus *x*, Havelburg's bacillus, the ordinary bacillus coli communis, and Sanarelli's bacillus icteroides. The "*mode of death*" from the toxins of these various bacilli when injected into animals "*was the same in kind*," the toxins differed only in intensity, and the toxin of the bacillus icteroides was the most potent. The Commission, it is true, found reasons later that justified it in separating Sanarelli's bacillus from the other micro-organisms which are all evidently of the colon group, but their original observations remain of interest.

Now Dr. Caldas, our Brazilian correspondent, claims that the bacillus icteroides is a modification of the colon bacillus, which develops when that micro-organism is grown in the presence of certain molds, especially penicillium and aspergillus. We are, of course, here in the presence of that *crux* of present-day bacteriology, the question of the possibility of the transformation of a non-pathogenic into a pathogenic bacillus, or of one form of pathogenic into another. It is to be hoped that the present communications and the workers they stimulate may serve to throw some light on it, for it is one of the most important questions that bacteriology has to face at the present time.

## THE "INDEX MEDICUS" AND THE TWO ENGLISH-SPEAKING MEDICAL ASSOCIATIONS.

IT has been definitely announced that unless some sure means of providing for its financial support could be secured the *Index Medicus* must cease publication. This declaration has been greeted with sincere expressions of regret from every quarter of the medical world.

Various methods have been discussed in Germany by which a periodical to replace it might be established, to be published, of course, in the German language. The editor of the well-known *Gazette Medicale de Paris* thinks that the periodical to replace the *Index Medicus* should be published in French, and he has recently made an eloquent appeal to French medical men for funds for that purpose.

It would be unfortunate, indeed, if this great help to the medical profession everywhere, as well as in England and America, should cease to be published in English. An appeal has already been made to the American Medical Association (at the recent Columbus meeting) to take upon itself the expenses necessary for the publication of the *Index*. *The Medical and Surgical Review* of London suggested recently in an editorial that the *Index* was a matter of interest to all English-speaking medical men, and that the British Medical Association should unite with the American Association for the worthy object of guaranteeing it financial support. The suggestion is an eminently fitting one, and seems most opportune. While the American Medical Association is well able to take upon itself the pecuniary burden of the *Index* should it see fit, still it would be a most graceful act for the British Medical Association to offer to share that burden.

We were of the impression that this matter of the *Index* was to be formally presented to the British Association for action at the recent meeting. Published accounts so far give us no inkling on the subject.

We hope that the opportunity was not neglected, and shall confidently look for the heartiest cooperation in this matter from the two Associations—a cooperation that will do much to draw English-speaking medical men closer together, while serving to perpetuate a most useful and labor-saving work for the medical profession of the world.

# ECHOES AND NEWS.

***Beri-Beri in Mississippi.***—Two cases of beri-beri have been reported at Biloxi, Miss. The disease has heretofore been practically unknown in that region.

***Post-Mortem Honors.***—Some time after his death the Liverpool Samaritan Hospital for Women elected the late lamented Lawson Tait consulting surgeon to the hospital.

***A Tablet in Memory of Dr. Love.***—The Board of Governers and the medical and surgical staff of the Mountainside Hospital in Montclair have had placed on the walls of the hospital, in the main corridor, a tablet in memory of the late Dr. Love, first president of its medical and surgical staff.

***Dr. Frank Donaldson Appointed Assistant-Surgeon of Volunteers.***—Dr. Frank Donaldson of New York, Assistant-surgeon to the "Rough Riders," who did such excellent work in caring for the men at Montauk Point, has been appointed Assistant-Surgeon of Volunteers, and expects soon to go out to the Philippines.

***A Hospital at Des Moines.***—A hospital will be built this fall under the auspices of the Methodist Church, at Des Moines, Iowa. It will be conducted on non-sectarian lines. The buildings will cost $100,000 and an endowment fund of $100,000 will be provided. The Methodist Conference of Iowa now pays more than $10,000 annually to hospitals outside the State.

***Another Stomach Removed.***—On June 9th last Kocher removed the entire stomach of a woman, aged forty, who had cancer of the pylorus, uniting the duodenum and esophagus and suturing the abdominal wound over a small glass drainage-tube. The patient lived three and a half days after the operation. Autopsy showed some peritonitis as a result of necrosis of a small portion of the wall of the transverse colon.

***Obituary.***—Dr. William D. Hartman, who had been in active practice for some sixty years, died at Westchester, Penn., last week at the age of eighty-four. He was well known for work in conchology and entomology. His writings, especially on mollusks, are well-known in Europe as well as this country. He was a member of the Pennsylvania State Medical Society and of the Chester County (Pa.) Medical Society.

***The Plague in Italy.***—As we go to press there are persistent rumors though they are being denied, that the bubonic plague has found a foothold in the south of Italy and in Sicily. A number of cases, some of them fatal, are said to have occurred in Naples and Palermo. At Oporto in Portugal the situation is not so threatening as it seemed last week, but few new cases are developing and most of them are of mild type.

***Tuberculosis in Italy.***—Senator De Renzi, in a recent speech at Naples, declared that tuberculosis has cost Italy two million lives during the past thirty years, and last year alone (1898) killed fifty thousand persons. The Duchess Ravaschieri has presented to the Neapolitan Home for Incurables her fine villa at Pozzuoli as a sanatorium for tuberculosis patients. It is said that the villa is most favorably located, and could not have been better fitted internally for a sanatorium had it been specially built for that purpose.

***The Twentieth Century No-Horse Chaise.***—A writer in the *Echo medicale du Nord* compares the expense to a country doctor of a team and that of a motor tricycle. The figures are real, being taken from the actual experience of a physician of Buis. Putting the initial expense of two horses with necessary harness and carriages at $660, he estimates the running expenses at $480 a year. The tricycle cost him $500, and its keep cost $150 annually. To this sum must be added $30 more which the physician spent for carriages in very bad weather. With the motor tricycle he traveled 20,000 kilometers (12,427 miles) over roads decribed as "terrible," without a single serious accident.

***A Congress for Dispersing Hailstones by Artillery.***—An assemblage under this title is shortly to meet at Casale Monferrato, Italy, and a large number of medical men, engineers, agriculturists and meteorologists have announced their intention to read papers and to participate in the discussions, among which the question above indicated is down for consideration. It seems that there have been an unusual number of fatalities in Italy during the present summer from lightning. The storm cloud from which the lightning comes is almost invariably charged with hailstones, and it is now suggested that the bombardment of such clouds hitherto successful in protecting vineyards and olive plantations, might also lessen the danger from lightning.

***Inseparable Twins.***—Toward the end of July a pair of joined twins somewhat resembling the Siamese twins were presented before the Academy of Medicine of Rio Janeiro, Brazil. They were united by a band of soft tissue at the upper part of the abdomen, posteriorly and laterally. The members of the Academy agreed that an operation for the division of the band seemed feasible. All the important organs of the two girls were fully developed and seemed independent. The operation was attemped July 29th in the presence of many of the most distinguished surgeons of Rio Janeiro. Incision into the band revealed the fact that the kidneys of the twins extended through it and that its division might prove fatal. The operation was abandoned after the exploratory incisions and no evil effects have followed from it.

***Typhoid Fever in Paris.***—As Paris is to be crowded next year with visitors from all over the world her sanitary condition is a matter of universal interest. The present state of the city with regard to typhoid is not encouraging. It was thought that the supplying of all quarters of the city with water from municipal sources would lead to the gradual diminution and practical disappear-

ance of the disease. The water-supply is now in working order in practically all parts of the city, but the expectations as to typhoid have been disappointed. Professor Thoinot at a recent meeting of the Société des Hôpitaux reported that there had been in 5½ months from January 1st to June 10th, 248 deaths from typhoid. This is 9.8 per 100,000 and this is as many as occurred during any twelve months between 1894 and 1898. Thoinot claims that the increase of typhoid is due to neglect of the water-supply and the use in certain quarters of the city of other than the regular city water.

*A New Law for Canadian Barbers.*—In the Province of Quebec, Canada, a law goes into effect on September 1st, according to the provisions of which no barber is allowed to take up the practice of his profession—or begin business—until he has passed an examination before the Graduate Barbers' Union and received a certificate from the Barber's Association of the Province. Every candidate must satisfy the Association that he has served for three years as an apprentice at the trade. He must also bring a certificate from a physician in good standing, that he is suffering from no contagious disease. Besides a rigid examination as to his ability to fulfil the manifold duties of the *tonsorial artist*, the candidate is obliged to answer a series of questions with reference to the hygienic precautions necessary to prevent the spread of any contagious disease from one customer to others. This quizzing includes especially the sterilization of instruments and towels and the proper use of toilet preparations and instruments, so that by no possibility can they become conveyors of infection.

*Major Russell Harrison's Illness.*—Major Russell B. Harrison, the son of ex-President Harrison, who is Inspector-General of the United States troops at Santiago, Cuba, is reported suffering from yellow fever at Cristo, the point to which headquarters were removed from Santiago when yellow fever became epidemic among the troops quartered in that city. Recent reports seem to indicate that Major Harrison is on the road to recovery though at first it was reported that he was critically ill. His was one of President McKinley's appointments from civil life during the war that caused great dissatisfaction. Major Harrison had had nearly ten-years' military experience in all ranks of the National Guard of Indiana up to lieutenant-colonel and he did much at once to disarm public comment by his success in maintaining discipline when he was appointed provost-marshal of the Seventh Army Corps at Jacksonville, Florida. His work in the same capacity in Havana gave great satisfaction and at Santiago he was looked upon as a most capable and efficient officer. The favorable reports of his condition are especially welcome.

*A Sanatorium for Consumptives versus a Man-of-War.*—Some time ago the Portuguese Minister to Brazil suggested a contribution from the Portuguese residents of that country in order to make a present of a warship to the mother country. Some 500,000 milreis (about $275,000) were subscribed. The sum was, of course, totally inadequate for the construction or purchase of a modern warship of any importance. Queen Amelia of Portugal who is greatly interested in the health of her people, so much so that on more than one occasion it has gone the rounds of the medical journals (as our readers may remember) that she had a diploma in medicine, now proposes that the money shall be used for the building and furnishing of a sanatorium for consumptives. It is said, however, that there is some objection to this on the part of the subscribers. We can only commend Queen Amelias' humane thoughtfulness. It is in line with the efforts that are being made by all the European governments and it is a significant index of the temper of the modern rulers and their feelings toward their people. We sincerely hope that the charitable purpose of the Queen will not be thwarted.

*The Plague at Various Points.*—The bacteriological examinations by the Pasteur Institute of material sent from Spain leaves no doubt that the disease spreading in Portugal is the true Eastern bubonic plague. In India, according to the *British Medical Journal*, the plague continues to spread at Poona to an alarming extent. During July 29th and 30th, 360 cases occurred, and 317 deaths. Five Europeans are numbered among the victims: Lieutenant MacLeod, Miss O'Gorman. Mr. and Mrs. Stephens, and Miss Bartley. Of these, the last named is reported to have died. The largest number of cases have occurred in the city, but the cantonment is also seriously stricken. The dryness of the season is causing great distress, and, as the meteorological conditions indicate the close of the monsoon, the prospects are considered ominous. Plague has reappeared in epidemic form in Bangalore, and a great exodus of the inhabitants is reported. In Persia plague exists and is spreading, while the fanaticism of the inhabitants prevent the enforcement of sanitary precautions that would limit the spread of the disease. The mullahs and the people of Bushire telegraphed to the Shah on July 25th, demanding the abolition of the plague measures. The populace have wrecked the telegraph wires, and so threatening is their attitude that the British Consul has advised his countrymen to avoid the native town. In Egypt the outlook as to the eventual suppression is more hopeful than it was. During the week ending August 2d, 6 cases of plague occurred in Alexandria. Since the beginning of the outbreak 37 cases have proved fatal, 39 have recovered, and 4 cases remain under treatment. The sanitary authorities have the work well in hand, and no effort is being spared to eradicate the disease. From Hong Kong the latest news is much more encouraging than recent reports have been. The *British Medical Journal* says "a marked decrease of plague in Hong Kong is reported, during the past week only 30 cases and 30 deaths being officially reported. It is only two weeks ago since we had to report over 100 deaths a week. The officials hope that the outbreak will soon entirely disappear." At Mauritius the state of affairs has grown worse and the type of disease there is very virulent. A recent telegram has been received by the British Colonial office from the governor of the island, reporting the

occurrence of 52 cases of the disease during the first week in August, of which 37 have proved fatal.

## OBITUARY.

PROFESSOR BUNSEN, the distinguished chemist and, at least, honorary member of the medical profession, died at Heidelberg, August 16th, in the eighty-ninth year of his age. His father was the distinguished Professor of Occidental Literature at the University of Göttingen at the beginning of the century, and a great antiquarian who had many friends in England. Professor Bunsen is most popularly known as the inventor of the Bunsen burner and the Bunsen electric battery. He has been Professor of Chemistry at the University of Heidelberg since 1852. He organized the magnificent chemical laboratory of the University and made its courses in chemistry the best known in Europe. It was here in conjunction with Kirchhoff, the Professor of the Physical Sciences at the same University, that he made the great scientific discoveries of the spectroscope and the possibilities of spectrum analysis. Nearly sixty years ago he announced before a meeting of the British Association for the Advancement of Science at Glasgow his discovery of Kakodyl, a compound containing over fifty per cent. of arsenic and yet possessing no poisonous properties. It is only during the last year or two that the possible alterative value of this compound has been developed, especially by French physicians. He was the joint discoverer with Berthold of the hydrated oxid of iron as an antidote for arsenic.

Medicine has lost in Bunsen one who has made very important, practical contributions to the century's advances in medical matters. He received the honorary degree of M.D. in 1875.

## MEDICAL MATTERS IN NEW YORK.

A LIQUID-AIR CREMATORY — ARRESTED FOR PRACTISING MEDICINE ILLEGALLY—A NEW HOSPITAL—DR. WOODBURY TO WITNESS GERMAN ARMY MANEUVERS — A TELEPHONE TALK — EXPERTS ON CHARITY—OBITUARY.

A COMPANY has been formed in this city for the purpose of cremating dead bodies through the agency of liquid air. The crematory will be erected near Nyack.

Dr. A. M. Petrella of 178 Sand street, Brooklyn, was arrested on August 19th for practising medicine illegally, in that he had failed to register with the Health Board. This is his second offense. He is said to be a graduate of the University of Naples and to have been at one time Mayor of Padua, in Italy.

The Beth Israel Hospital Association, by its President, Harris Cohen, has filed plans for a six-story and basement brick fire-proof hospital building, 100x78 feet, which will be erected on the northwest corner of Jefferson and Cherry streets, at an estimated cost of $100,000.

The German Emperor has given Dr. John McG. Woodbury of New York, recently appointed by President McKinley United States Commissioner to investigate the medical methods of the German army, permission to witness the maneuvers of the Sixth Army Corps at Silesia in September. The doctor will thus have an opportunity to inspect the practical operation of the medical department of the German army.

Dr. Brown, a colleague practising in this city, met with one of those contingencies which probably very few men have the good fortune never to have experienced. Funds were low, and collections had to be made. So he made a list of those of his patients whose accounts were very long overdue. Among these was one Mr. Jones, who owed $25, and whom Dr. Brown telephoned as follows:

"Br-r-r r-r." "Hello!"

"Is Mr. Jones in?" "Yes."

"Please tell him Dr. Brown is at the 'phone."

Presently came Mr. Jones, who began cheerily: "Hello, old man. What's up?"

"Can you send me $25? I—— "

"Why, certainly, old man ——"

"I thank you kindly."

"Don't mention it, old boy. Say the word, and we'll double it. Where'll I send it?"

"To 411 West 44th street.

"Where?"

"411 West 44th street."

A pause.

"Who is this?"

"Dr. Brown."

"Oh. I thought this was my friend Brownell. Just excuse me a moment, Doctor, until I look at my checkbook."

Another pause.

"I am really very sorry, Doctor, but on examination I find my account at the bank overdrawn. At the very first opportunity, etc., etc."

Comptroller Coler has written to the State Charity Aid Association asking for suggestions in line with a general reform of the present system of appropriating public money for charity. The Association appointed a committee consisting of George F. Canfield, Charles S. Fairchild, Gertrude S. Rice, Alfred T. White, and Homer Folks to investigate the subject and prepare a reply. The committee has prepared a complete plan for dealing with the question which is embodied in a long letter sent by the Association to the Comptroller in answer to his request.

It is recommended that all appropriations of public money to private charities should be made in the general budget, and that the excise and license funds should be paid into the general fund for the reduction of taxation. No appropriation should be made for the support of any person until the city's Department of Public Charities has investigated the case and reported that the person in question is properly a public charge. All payments should be made on a per-capita basis, and public money should not be paid to private institutions in a lump sum. All institutions should receive the same rate of payment for the same class of inmates.

It is recommended that "appropriations to dispensaries might wisely be discontinued, though, in order to prevent

hardship, each institution might receive in 1900 one-half the amount received by it from city funds during 1899." If, however, it should be decided not to discontinue appropriations to dispensaries, the following regulations are suggested:

"That no new dispensaries be added to the list receiving public funds.

"That no dispensary should receive in any year from public sources more than one-half the amount received by it during the preceding year from voluntary contributions, nor, in any event, should it receive more in one year than it received in 1899."

When the city maintains institutions in its own Department of Public Charities for special classes of cases, and these institutions are not filled, the city should not pay for the same class of cases elsewhere.

The private institutions that are now receiving city money are divided into eleven classes and the amounts they will receive this year are as follows:

| | Number of Institutions. | Amount. |
|---|---|---|
| Children's Institutions | 51 | $1,665,723.76 |
| Infants' and Foundling Asylums | 7 | 551,050.18 |
| Maternity Hospitals | 12 | 54,822.78 |
| Hospitals | 60 | 271,550.40 |
| Dispensaries | 33 | 37,904.35 |
| Reformatories for Women | 6 | 40,604.08 |
| General Relief Societies | 22 | 19,250.70 |
| Homes for the Aged | 15 | 20,796.32 |
| Corporate Schools, mandatory | 28 | 205,000.00 |
| Institutions for Defective Children | 15 | 206,197.33 |
| Miscellaneous | 33 | 176,723.91 |
| All Institutions | 282 | $3,249,623.81 |

It is strongly urged that the city should keep a close watch and check upon all private institutions receiving public money.

Dr. Andrew K. Smith, a retired surgeon of the United States Army, died suddenly on August 15th. The doctor was a native of Connecticut. He was appointed Assistant Surgeon in 1853. He was retired in 1890 after "long and faithful service," with the brevet of Lieutenant-Colonel. Since his retirement he has practised medicine in this city.—Dr. James L. Kortright, formerly a resident of Brooklyn, died on August 15th at Middleton, whither he had gone because of pulmonary disease. Up to a year ago the doctor was one of the visiting staff of St. Catherine's Hospital, Brooklyn. Dr. Nathaniel Wilson Leighton died at his home in Williamsburg on August 15th. He was sixty-six years old. He was physician and surgeon at the Kings County Hospital in 1859 and later at the Eastern District Hospital. During the Civil War he fought for three years and saw service in many engagements. After the war he practised in Brooklyn and was United States pension examining-surgeon from 1866 to 1885. Dr. Leighton was a member of the Kings County Medical Society, the New York Medical Association, and the American Medical Association. He was a delegate to the International Medical Congress of the Pan-American Congress.—Dr. Tunis L. Schenk died on August 16th at his home in Brooklyn. He was graduated in medicine in Syracuse and was for some time Chief Surgeon and Physician at the Kings County Hospital. Dr. Schenk's ancestors had been long established in Kings County.

The Health Department of New York City makes the following report for the week ending August 19, 1899: Measles, 106 cases, with 7 deaths; diphtheria, 136 cases, with 25 deaths; laryngeal diphtheria (croup), 7 cases, with 5 deaths; scarlet fever, 61 cases, with 2 deaths; chicken-pox, 5 cases; tuberculosis, 181 cases, with 138 deaths; typhoid fever, 61 cases, with 17 deaths; cerebrospinal meningitis, 6 deaths.

## MEDICAL MATTERS IN CHICAGO.

### ANNOUNCEMENT OF CHICAGO COLLEGE OF PHYSICIANS AND SURGEONS—VITAL STATISTICS—INVESTIGATION AND VERDICT IN THE FLANDERS CASE—BLASTOMYCETIC DERMATITIS—STATE SANATORIUM FOR THE TREATMENT OF POOR CONSUMPTIVES.

THE eighteenth annual announcement of the College of Physicians and Surgeons of Chicago, the School of Medicine of the University of Illinois, sessions of 1899-1900, differs slightly from its predecessor. The fall term opens Monday September 18, 1899, with the presentation of diplomas and certificates of scholarship for admission to the college. April 18, 1900, is the day set apart for the commencement exercises. On April 19, 1900, is the opening day of the last spring term that will be given by this college, it having been decided that the best interests of the students will be conserved by conducting a continuous course. Beginning the first Monday in September, 1900, the work of the college will be continuous. The collegiate year will be divided into three terms of four months each, beginning respectively the first Monday in September, the first Monday in January, and the first Monday in May, and called the Fall, Winter, and the Summer terms. Each term will consist, as nearly as possible, of a session of sixteen weeks.

Each student will be required to attend two terms of four months each, in order to receive credit for a year's time. A student may receive credit for no more than two-terms' attendance in any calender year. However, a student may attend a third term in any year, provided he has the permission of the Dean and the written consent of his physician, for which attendance he will receive no credit for the time, but during which he may receive credit for work done. Four-years' time, that is, attendance upon eight full terms, will be required for graduation. The shortest interval between a student's matriculation and his graduation cannot be less than three years and eight months.

In addition to the change to the continuous course, the requirements for admission have been materially increased, necessitating a higher degree of knowledge and ability for one contemplating the entrance to the medical profession.

According to the weekly bulletin of the health department, the one satisfactory feature of the public health situation continues to be the low relative rate of infant mortality. At this season of the year deaths under one year of age usually average more than one-third of the

total number of deaths. During the week ended July 15th, the second week of the volunteer medical work among the young of the congested wards, the total deaths were 559, of which number 216, or 38 per cent., were of babies under one year of age. In the succeeding weeks the proportions have been as follows: Week ended July 22d, 36 per cent.; week ended July 29th, 31 per cent.; week ended August 5th, 29 per cent. Last week, August 12th, of 490 deaths there were 134 of children under one year, or 23 per cent of the total.

It is suggested in the bulletin that these figures show the value of the labors of the volunteer physicians and afford a conclusive argument for making these midsummer sanitary and medical inspections a permanent feature of public health work.

In our last letter to the MEDICAL NEWS (August 12th, page 214) we referred to the death of a Mrs. Flanders, the victim of "divine" healing. Since then an investigation has been conducted by Coroner Ebbe. The verdict of the Coroner's jury was to the effect that Mrs. Flanders died "from peritonitis and puerperal septicemia at St. Luke's Hospital, caused by criminal negligence and malpractice on the part of De Witt C. Holmes and Mrs. H. Bratz." A mittimus was immediately issued and Holmes and Bratz were securely placed behind bars. The case of the State Board of Health *versus* Mrs. Bratz was tried before Justice Everett August 16th, and after hearing much evidence and arguments, Mrs. Bratz was fined $100 and costs for practising medicine without a license, finding that thé woman had given medical attention to Mrs. Flanders under the guise of faith cure. Notice was given by the defense that an appeal will be taken to the Circuit Court. It is believed that the outcome of this case is but the preliminary skirmish for instituting other law suits having for their object the extirmination of Dowieism. Dowie's followers consist largely of hysterical women and ignorant, feeble-minded men.

At a meeting of the Chicago Medical Society, Drs. James N. Hyde, Ludwig Hektoen, and Arthur D. Bevan contributed a joint paper on blastomycetic dermatitis, in which they reported a very interesting and instructive case. R. B., aged fifty-seven, day laborer, resident of Chicago and married, presented himself September 30, 1898. He was a native of Holland and came to America in 1892. Mother, and one brother at forty-eight, died of consumption; three sisters also died of the disease. Patient had six children of his own, four living and in good health; two dead from causes unknown. He weighed 99 pounds, a decline from his average weight of 146 pounds. He had been a heavy drinker. About five years ago a small reddish spot appeared on the right leg somewhat below the knee. This gradually extended until it covered practically the anterior surface of the limb and developed into a tender, painful, and hemorrhagic sore somewhat resembling an ulcer. Eventually, under treatment, healing occurred over the entire affected area with the exception of a split-pea-sized patch on the inner aspect of the leg between the knee and the ankle. The result was the production over the region named, with the single exception of the unhealed patch, of a thin, broad, cicatriform tissue, quite superficial, insensitive, and in places scaling. Between one and two years ago the left thumb was found to be involved in a morbid process resembling that first seen upon the leg, a process which by gradual extension from the site of original implication produced a reddish patch well defined in outline, with a bluish-red areola and a decidedly verrucous aspect covering the dorsal face of the left thumb quite as far as the nail border, and also the dorsal surface of the left hand to a point somewhat above the line of the wrist. This was dull-reddish in color, sharply defined in outline, having a peculiar bluish-red border extending about four millimeters away from the edge of the affected area. Body of the patch was made up of an elevated mass of infiltration with a verruciform development of fine, pinhead-size papillæ projected externally.

Dr. Bevan placed the patient on iodid of potassium with the result that the sore on the leg healed, and such material diminution in the size of the patch on the hand occurred with such marked amelioration of all the symptoms that the question of operative interference was for the time set aside. Patient has had exacerbations of his trouble during the intervals when the iodid has been discontinued.

The authors say: "We know that the lesions of actinomycosis sometimes are relieved by the administration internally of iodid of potash. In the light of present experience we now know that blastomycetic affections of the skin sometimes are thus benefited. There is suggested here an interesting possibility or probability that many of the cases heretofore grouped under the known and common forms of granulomata, *i.e.*, syphilis and tuberculosis, or cases mistaken for epithelioma and treated as such are, in fact, due to as yet unknown or little known germ-forms, protozoa, yeast-fungi, or bacteria, and further investigation in this line may lead to the solving of the great problem of the etiology of malignant growths.

"The surface of the skin is covered by an imperfect horny layer of varying thickness, and also by polymorphonuclear leucocytes. In places small abscesses have broken through the horny layer. The striking feature is the hyperplasia of the epithelium in the form of variously shaped branching downgrowths from the interpapillary processes. In many places the picture greatly resembles a squamous-celled carcinoma. Numerous focal collections of leucocytes and miliary abscesses are found in all parts of the epithelial proliferations; in these abscesses we find the organism peculiar to the process; some of the abscesses contain multinuclear giant-cells of the tuberculous type. The tissue between the epithelial downgrowths presents acute and subacute inflammatory changes, but only few characteristic miliary abscesses."

The organisms are found only in the miliary abscesses in the epithelium and always outside of the cells; they are best stained by methylene blue and average twelve mikrons in diameter; they are round or oval, surrounded by a distinct capsule from which the finely vacuolated or granular protoplasm is separated by a narrow, clear zone.

The Illinois Society for the Prevention of Consumption

is preparing plans for the establishment of a State sanatorium for the treatment of consumptives, which it will ask the next Legislature to build. The plans are based on the announcement of Dr. J. A. Egan, Secretary of the State Board of Health, that the Board, after investigating the advisability of such an institution, reports favorably.

The fundamental purpose of the project is to provide means for the treatment of the poor who are disabled by the disease. The scheme is the idea of Health Commissioner Arthur Reynolds. Governor Tanner has indicated his intention of supporting it and of approving the purpose of the society in asking for an appropriation of $500,000 with which to build the sanatorium.

The report of the State Board of Health, which is in course of preparation, will state that Illinois stands eighth in the list of States in the proportion of consumptive citizens. It will assert also, that most of the consumptives are poor people who live in the country and cannot afford to attend private hospitals. The hospital at Dunning is declared to be inadequate for taking care of the poor consumptives in Cook County. The result of the investigation is summed up as follows: There are thousands of tuberculous persons inhabiting the tenement districts of the larger cities, and also distributed throughout the State, unconsciously disseminating the germs of disease among their own kin, friends and neighbors, and thus jeopardizing the public health. It is believed that many such afflicted persons are curable if properly cared for, and, aside from a humanitarian view, that the restoration to health of disabled breadwinners and protection to communities from infection by tuberculous patients would be of great financial benefit to the State.

## CORRESPONDENCE.

### *YELLOW FEVER, AN INFECTION PRODUCED BY MALIGNANT COLON BACILLI.*

*To the Editor of the* MEDICAL NEWS.

DEAR SIR:—I have the honor to send you with this a monograph of mine on the etiology and serum-therapy of yellow fever. According to the conclusions that I have reached you will see by this publication that I do not recognize the specificity of Sanarelli's bacillus in yellow fever. My researches seem to point rather to conclusions that this disease is a form of infection with colon bacilli, rendered malignant by special circumstances; that it is, in a word, a form of colon bacillemia (French, coli-bacillose).

Seeing the interest the MEDICAL NEWS takes in yellow fever I have thought that you would be desirous of giving your numerous readers the opportunity to know my conclusions. I enclose a communication on this subject presented by me some time ago to the National Academy of Medicine of Rio Janeiro, Brazil, and to the Pasteur Institute of Paris and remain

Yours etc.,

DR. PHILLIPE CALDAS.

RIO GRANDE DO SUL, BRAZIL, July 14, 1899.

[Dr. Caldas' inclosure is interesting because it is a serious and, to the eyes of its author at least, successful attempt to prove practically that interesting theory so often discussed in recent bacteriology, that bacilli may be polymorphic; that is, may exist under different forms, having special virulence in each form. It is an important contribution to the question of the possibility of transformation of a non-pathogenic into a pathogenic bacillus.

Dr. Caldas has found that the bacillus coli communis cultivated in the presence of the micrococcus pyogenes aureus and the streptococcus pyogenes or certain forms of molds, especially penicillium and aspergillus, takes on a very marked change of form. It comes to resemble very much the bacillus icteroides described by Sanarelli. When injected into animals it produces the same lesions as those described after the injection of the bacillus icteroides, especially the fatty degeneration of the internal organs. As it is well known that yellow fever is a mixed infection and that pus cocci are always present in lesions of the disease, and as it is conceded that they are of etiologic importance in the production of certain symptoms at least, the possibility of this change of virulence because of the presence of mixed infection cannot be denied.

Dr. Caldas further quotes the articles by Dr. de Lacerda (which we have abstracted for our readers at various times), who found that the bacillus icteroides grew with special virulence and special luxuriance where molds were present.

Dr. Caldas succeeded, by injections of cultures, of the micro-organism isolated by him, into horses, in producing a serum which was effective for the cure of yellow fever. Of eleven cases of yellow fever treated with this serum eight were in the second stage and were considered very seriously ill. Only two died, a less mortality than attends any other method of treatment. It is true the author adds that two others were actually injected, but as they were moribund at the time they are not allowed to enter into the statistics.

According to Dr. Caldas, then, yellow fever is an infectious disease of gastro-intestinal origin. It is a mixed infection produced by the colon bacillus, a normal saprophyte of the intestinal canal, which, when allowed to grow in the presence of the stapylococcus pyogenes aureus, or of the streptococcus pyogenes, or both these micro-organisms, in a culture-medium containing molds, changes its morphologic properties and becomes a terrible pathogenic agent, the microbic cause of yellow fever.—EDITOR.]

### *THE YELLOW-FEVER QUARANTINE IN VIRGINIA.*

LETTER FROM NEWPORT NEWS.

*To the Editor of the* MEDICAL NEWS.

DEAR SIR:—A telegram from Surgeon-General Wyman on Monday asking me to take a hand in the yellow-fever crisis here found me shortly afterward making a house-to-house inspection of the towns along the Chesapeake and Ohio Railroad, between Williamsburg and this place. The object of this house-to-house inspection was to locate any suspicious cases of sickness in the little villages and the country adjacent. These towns are so

situated that they offer a natural outlet for refugees from Hampton and Phœbus. Persons desiring to get out of the infected regions, having gotten through the lines, would drive to one of the stations along the line and get their tickets to some place further north, and many hundreds did so in the few hours which intervened before the establishment of a complete condon around Phœbus and the Soldiers' Home.

It is a well-known rule in a district threatened by yellow fever that the limits of clean territory and the district between this and the territory adjudged infected (the so-called Neutral Zone) should be immediately determined. This Neutral Zone (which, in the present instance is that between Newport News and Williamsburg) is to be held as infected, so far as communication with clean places is concerned, and as clean with regard to the infected district.

A thorough inspection of this district in the last few days has failed, I am happy to say, to show a single case of sickness of any kind, and as five days have elapsed since it was possible for anybody to have gotten out of Phœbus and pass through the district, I think we are safe in saying that this Neutral Zone is clean.

There was a good deal of anxiety in Newport News because it was known that people were leaving Hampton in large numbers, and taking the railroad at points along the line; to prevent this, the State Board of Health ordered that no trains be stopped between Newport News and Williamsburg. While this, unquestionably, was necessary during the first three days of the scare, it has not been so since Dr. White declared that this town *was not infected.* The Health Board of Newport News, however, insist upon holding Hampton as infected; and, although the State Health Board sent an inspector who was to require certificates from persons wishing to board the trains, either from the North or South, the Newport News Board of Health has refused under any conditions to allow passengers to be taken on at any point in the Neutral Zone.

Not only passenger, but freight, trains have been forbidden to stop at points in the Neutral Zone, so that provisions have become nearly exhausted in the district, and farmers are complaining bitterly of the loss of their crops, being, of course, unable to ship them north or south.

I think that we have finally convinced the powers that be that there can be no possible danger in putting off freight in the Neutral Zone and taking on the farm products for shipment to Richmond in the one direction or Newport News in the other.

Surgeon Glennan, in his article, entitled "Measures to Be Taken in an Infected and Non-infected Town," in treating of the precautions which should be taken at uninfected places having communication with places which are infected, and with places in the Neutral Zone, says that it is a complex and difficult proposition, and that this is due to the fact that in the several States (Florida excepted), individual counties, villages, and settlements are a law to themselves as regards sanitary matters. Probate judges, mayors, and self-constituted village authorities proclaim a quarantine against the world, and over all this situation State Boards of Health have only advisory powers, and their advice is often received with derision. This is emphasized by the position of the local Board of Health here, with reference to Hampton and the Neutral Zone.

My experience here and last summer at Port Tampa only goes to further convince me that the quarantine organization should be in the hands of the National Marine Hospital Service.

A year ago, for instance, the transport "Santiago," with twenty-odd officers and over a hundred men, all of whom had been desperately ill with either yellow fever, dysentery, calentura, or other of the innumerable diseases which Siboney supplied, was sent from that port to Port Tampa. Although at the time of our arrival at the latter place we had been five days out of the infected district, the State Board refused to allow the officers and men to be taken through the State in a closed train, thereby forcing us to remain ten full days in quarantine at Egmont Key.

Dr. Geddings, who had charge at the Egmont Quarantine Station, speaks in his report of "the pitiable condition" of the officers and men; and I remember only too well the terribly depressing effect which this ten days had upon one and all of us. We should have been sent, without delay, to points in the North. A number of the officers grew steadily worse while we were there, notwithstanding the fact that we had the most devoted attention from Dr. Geddings and every comfort that money could buy, and I know of one brave officer whose death may be directly attributed to the sojourn at Egmont Key, and of a much-delayed recovery in a number of others. It is perfectly evident that the National Government should have had the power to take these men directly North.

The need of a National control again is emphasized by the action of the Norfolk authorities in quarantining against a perfectly clean place like Newport News, against which Newport News naturally retaliated.

Finally, while we are not yet out of the woods, it may safely be stated that the outlook is most favorable.

I would like to say just here that the handling of this whole situation by Surgeon-General Wyman has been absolutely efficient and thorough, and the people owe him a debt of gratitude which I am sure they will only be too glad to acknowledge.

FRANK DONALDSON, M D.,
Acting Assistant-Surgeon Marine Hospital Service.

NEWPORT NEWS, August 6, 1899.

[This letter was delayed in transmission, but the situation therein described is so typical of what may under existing laws occur at any time in any section of our country that it is interesting and instructive.—ED.]

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*For Rhagades.—*

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M. Sig. Apply a few drops to affected areas.—*Vigier.*

## OUR LONDON LETTER.

[From Our Special Correspondent.]

THE PORTSMOUTH MEETING OF THE BRITISH MEDICAL ASSOCIATION—SCANTY ATTENDANCE—DISCUSSION OF THE PREVENTION OF TUBERCULOSIS BY CLIFFORD ALLBUTT, SIR WILLIAM BROADBENT, OSLER AND TYSON—REVISION OF PHYSICAL STANDARDS FOR PUBLIC SERVICES—THE DESTRUCTION OF MOSQUITOES—RESULTS OF ANTISTREPTOCOCCIC SERUM—REACTIONARY "ANTI"—ADDRESS OF PRESIDENT OF SECTION ON STATE MEDICINE.

THE attendance at the Portsmouth meeting was pretty much as predicted in our letter written at the close of the first day. Instead of 1800 members, as had been anticipated, the register hardly showed 800 and of these not more than two-thirds were ever present at any one time. The attendance at the general meetings fell rapidly from 250 on Wednesday, to scarcely 100 on Thursday, and a mere corporal's guard on Friday.

And small blame to them; for the weather got hotter and hotter, the rooms were stiflingly close and these sessions have nothing before them except the solemn Addresses in Medicine and Surgery, etc., and such odds and ends of business as the General Medical Council—the Dowager Empress of our medical Flowery Kingdom—allows the Association to have to play with.

Even that redoubtable warrior Mr. Victor Horsley found this year that he could not get any question before the General Session which had not passed safely through the sifting-committee of the Council and been endorsed as proper to be considered by the Session. The attendance at the various Sections, however, though small was of good quality and the papers and discussions interesting and well sustained.

The chief interest of any unusual order seemed to center in two sections, one large and imposing, the Section on Medicine, and the other small and unique, the Section on Tropical Diseases. Two main discussions were taken up in the former, the "Standards of Requirement in Examinations for the Public Services" and "The Preventive and Remedial Treatment of Tuberculosis." The first discussion was opened by the reading of the paper of Sir Dyce Duckworth, followed by Professor Osler and Dr. Wallace. The judgment of all who participated tended strongly toward a rationalization of the present standards, and the relaxation of red-tape and mechanical methods so as to leave more discretion to medical examiners. All agreed that many most valuable candidates and recruits were rejected, merely on account of some slight temporary heart-murmur and albuminuria of adolescence or from failing to reach the milliners measurement of the present standards in some trifling particular.

Dr. Savill in particular criticized the folly of rejecting men on account of the deficiency of a fraction of an inch in height and presented a careful analysis of a number of cases rejected on this ground showing them in chest-measurements and general vigor to be distinctly above the average. The rigid standard of a precise minimum is simply the revival of the ignorant drill-sergeants' preference for "tall fellows" and "even-topped" ranks, for as all anthropologists now know, small men have bigger chests, better muscle and will do more work, on less food in proportion to their size than tall ones. And as mere weight and length of sword-reach have nothing whatever to do now days with winning battles, while toughness, endurance, and resistance to disease and hardship have everything, it is high time this absurd relic of barbarism was modified if not abolished. If a short man has a good chest, legs and *stomach*, and strength enough to march under a rifle, he is just as good a modern soldier as any six-footer can possibly be and will stand thirty per cent. more bucketing about on thirty per cent. less food.

Nearly all the experts who took part, including Surgeon-Generals Moore and Cuffe, insisted strongly upon the folly of sending recruits under twenty-two to twenty-five years to serve in the tropics, and at the close of the discussion a resolution to this effect and in favor of rationalizing the present physical standards was passed, to be forwarded to the War Office.

The discussion upon the "Prevention of Tuberculosis" lasted two days, and was opened by Professor Clifford Allbutt, followed by Sir William Broadbent, Professor Osler, Sir Douglas Powell, Professor James Tyson of Philadelphia, Sir Hugh Beevor, and others. The tone of the discussion was most hopeful, the open-air sanatoria with the encouraging records were well represented and many of the speakers, including Clifford Allbutt himself, ventured to express the hope that even within our own life-times we should see tuberculosis, if not exterminated, at least put in a fair way toward it. Stress was laid upon the increasing cleanliness of modern life as illustrated in the disappearance of domestic parasitic insects, always a dangerous source of infection, and the belief expressed that "household asepsis" would prove ultimately an even greater benefit than the surgical variety.

Well-deserved importance was attached to the splendid work of Birch-Hirschfeld upon the starting-point of pulmonary tuberculosis, which he found in a large percentage of thirty incipient cases, dead of other causes (out of a series of 4,000 consecutive autopsies at Leipzig), to be one of the bifurcations of a particular bronchus supplying the posterior part of the apical lobe. As the bacilli in these earliest-stage cases are not in the alveoli or the lymph-nodes but just under the bronchial mucous membrane, he believes it to be an aerial stagnation-infection and the apex a point of least resistance in the lung.

Sir Hugh Beevor presented a series of curves and maps showing the death-rate from tubercle under various conditions, all of which clearly pointed to the close connection between tubercle and over-crowding and deficient ventilation. The death-rate rises steadily with the number of inhabitants per room and house. Special stress was also laid by several speakers upon the fact that plenty of fresh air and life in the open was the chief requisite in cure, climate, temperature, moisture, and elevation being minor considerations. As Dr. Hillier expressed it, "climates differ in desirability, simply in so far as they tempt the patient to live in the open air." Provide plenty of home

sanatoria, especially for the poorer classes, and cure patients in the climate in which they have to live and work. Dr. Woods Hutchinson presented tables of measurements of 82 tubercular chests, showing that they have a most uniformly, typical shape, *round*, narrow, and long, instead of *flat*, as usually described. This shape of chest is simply the arrested chest of early adolescence, the thorax failing to complete its development from the almost dog-shaped chest of the embryo to the flattened adult human type. Hence any chest failing to develop properly in breadth after fifteen or sixteen years, should be regarded with suspicion and diameter measurements be a valuable guide to the pretubercular state.

As a rule our English brethren seemed to think little of either sputum examinations, which they regard as too uncertain and a great deal of trouble for little benefit, or the diagnostic use of tuberculin. In some of the largest hospitals in London bacteriological examinations of the sputum are made but in a small proportion of cases.

The tone of the discussion upon malaria and its prevention in the Tropical Diseases Section was almost equally hopeful. Specimens of the guilty mosquito (*Anopheles* claviger, and *A. pictus*) and of the various stages of the development of the malarial parasite in their interior were sent over by Bignami and Grassi and made a fascinating display.

High anticipations were expressed of the results of the Liverpool School's expedition to West Africa, headed by Major Donald Ross, which was even then rocking upon the Bay of Biscay en route for Sierra Leone. If as stated by entomologists, the breeding-grounds of *Anopheles* are decidedly limited then some means of eliminating the disease by checking the breeding of its carrier ought certainly to be hit upon by the expedition.

A valuable paper was read by Dr. George H. Nuttall of Cambridge upon the activity of insects as carriers of disease, in which he regards the common fly as one of the greatest offenders in this respect. Experiments by himself upon the transference of various diseases by the bites of pediculi, fleas and bugs had, however, yielded almost entirely negative results in some 250 instances.

Sir Patrick Manson reported an autopsy upon a patient suffering from *filaria nocturna* who had committed suicide during the day-time, and the heart, pulmonary arteries, great vessels and lungs were found simply crowded with embryos while seventeen adult worms were found in a lymph-varix in the pelvis.

In the Section of Obstetrics and Gynecology much interest was elicited by the discussion of Dr. Herbert Spencer's paper on the "Serum Treatment of Puerperal Septicemia." His conclusions were decidedly unfavorable to the treatment which he thought had not lowered the mortality and was sometimes attended with danger. Although he admitted that its use usually lowered the temperature and made the patient feel more comfortable. Drs. Arnold Lea and Whitelocke reported cases in which they had found it of decided benefit, but Professor Murdock Cameron, Dr. More Madden, and Professor Byers tended to agree with the original paper. The latter declared that in spite of asepsis, puerperal fever was in no way diminishing, which if true is a professional scandal and ought to have a Collective Investigation Committee or a Royal Commission turned loose on it at once.

The attitude of the daily press toward the meeting was distinctly different from that of our own in two respects, it was less keen but more respectful. Whether the advantage of the latter balanced the disadvantage of the former is a question. The gist of the General Sessions and the substance of the Address were briefly but well reported, but the work of the sessions was for the most part regarded as "confidential," in other words, too technical.

The only exception was the Section on State Medicine, which was quite fully reported, though this was a pity in one respect, for the President made a most unfortunate and reactionary address, which was thus widely trumpeted abroad. He chose to fall foul of the entire principle of serum-therapy, *because* it was not identical with that of vaccination. Declared its boasted successes were failures, especially in diphtheria, and denounced the reckless slaughter of animals, which so far had "never saved a human life or lightened appreciably the load of human suffering," quite *à la* Lawson Tait, whose spirit must have entered into him. Needless to say it has been welcomed with howls of delight by "antis" of all sorts.

## SOCIETY PROCEEDINGS.

### THE BRITISH MEDICAL ASSOCIATION.

*Sixty-seventh Annual Meeting, Held at Portsmouth, England, August 1, 2, 3, and 4, 1899.*

[Continued.]

THIRD DAY—AUGUST 3D.

SECTION ON MEDICINE.

THE second day of the meeting of the Section on Medicine was principally devoted to a discussion of the

PREVENTATIVE AND REMEDIAL TREATMENT OF TUBERCULOSIS.

The large hall in which the meeting was held, was almost inconveniently crowded, and great interest was manifested in the subject.

PROFESSOR CLIFFORD ALLBUTT'S contribution dealt with the modes of infection of the disease, the morbid anatomy of its first stage, diagnosis, prevention, and cure. He made special reference to the treatment of consumptives in sanatoria. SIR R. DOUGLAS POWELL alluded to the advantages of sanatoria in educating the practitioner in the treatment of patients at home, in providing for homeless persons afflicted with the disease, instructing the patient in the discipline of illness. He also referred to some of their drawbacks. PROFESSOR OSLER laid great stress on the repeated examination of the sputum for tubercle bacilli, and said that in his experience—not a small one—the tuberculin test for the diagnosis of early phthisis had been invariably successful. In his opinion the personality of the physician in charge of the sanatorium was the most important factor of the treatment. DR. TYSON referred to the marked decrease in

the mortality from phthisis in Philadelphia during the last twenty years, eight per cent. He thought that the treatment by drugs should not be entirely ignored, and quoted favorable results from the use of creosote. DR. SHINGLETON SMITH rather deprecated the notification of phthisis, hoping that anything of the nature of quarantine of consumptives would be avoided. SIR HUGH BEEVOR concentrated his observations on overcrowding as a cause of tuberculosis, and referred to tables showing the relation of phthisis mortality to density of population. The President, DR. BRUCE, called attention to the prevalence of tuberculosis in the training-ships for boys in the Royal Navy, its probable cause being the retention of the old fashioned insanitary wooden ships, particularly objectionable when used for sleeping quarters. DR. PARSONS considered that in view of the great difficulty in diagnosis of early tuberculosis every apparent cure of a case, prior to the appearance of tubercle bacilli in the sputum, should not be included in statistics. MR. LARDNER GREEN described the use of a spray of dilute formalin as an adjunct to the sanatorial treatment of phthisis patients. DR. DENTON JOHNS distinguished between sanatorial and climatic open air treatment, and discounted the latter in the absence of the former. He showed a patient that had been cured under sanatorial treatment. DR. CALWELL brought forward details of cases that had done well under hygienic treatment independently of sanatoria. DR. BURTON-FANNING stated that the National Association for the Prevention of Consumption and Other Forms of Tuberculosis was just about to begin the building of sanatoria for the London poor.

### SECTION ON SURGERY.

The discussion of

### THE PREVENTION AND TREATMENT OF SYPHILIS IN THE NAVY AND ARMY

was opened by Deputy Inspector-General E. E. MAHON, R.N., and MAJOR W. DICK, M.B. The former called attention to the following statistics: In 1880, the average strength of officers and men on the home station was 22,370; in 1897 it was 43,900, or nearly double. In 1880 the loss to the service in number of days' sickness from syphilis, primary and secondary, and gonorrhea was as follows:

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| Syphilis, primary | 32,223 |
| " secondary | 12,859 |
| Gonorrhea | 40,392 |

In 1897 the loss to the service in number of days' sickness was:

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| Syphilis, primary | 76,335 |
| " secondary | 49,764 |
| Gonorrhea | 77,054 |

The figures show what an enormous loss there is to the country through the prevalence of these diseases. He considered that it was impossible to hope that the Contagious Diseases Acts would ever be enforced again. That, however, would be the most effective way of dealing with the question. Failing this the moral elevation of the men themselves must be attempted, and especially the encouragement of sobriety. He emphatically asserted that intemperance was very largely responsible for the number of cases of venereal disease. The following suggestions were made: (1) Good naval barracks to be substituted for depôt ships in all the principal ports. (2) Advice to be given to young soldiers in regard to personal cleanliness. (3) Early marriages to be encouraged, which might be done by offering pensions to the widows of seamen. (4) Pensioners in good health, and not suffering from the sequelæ of venereal disease, to be given preference for civil employment by the Admiralty. Major Dick called attention to statistics, collected at five-years' intervals, showing the increasing number of cases of venereal disease compared with all cases of illness in the army. The percentages for the years 1882, 1887, 1892, and 1897 were respectively 23.66, 26.65, 30.94, and 38 71. It will thus be seen that there was in fifteen years an increase of 15 per cent. of cases of venereal disease. In 1897 the number of cases of venereal disease treated at Netley was nearly one-third of the total number of cases of sickness. The following suggestions were made as to the prevention of syphilis in the army: (1) The inculcation of moral principles in the young soldier. This, though admirable, is theoretical rather than practical. (2) Hygiene of the individual. (3) The rendering of a soldier's life as pleasant as possible in barracks, to prevent his seeking his pleasures abroad in the evenings. Men should be encouraged to come to hospital the moment they themselves detect anything suspicious.

MAJOR LAMBKIN, R.A.M.C., dealt in detail with the intramuscular method of injection. By this method the treatment of syphilis can be continued for as long a period as is thought necessary with little or no trouble to the patient. The following prescription has been employed: Hydrarg., 3j; lanolin pur., 3ij; ol. carbol. (1 in 20), 3iv. Ten minims are injected in the buttock once a week, and the whole course of treatment lasts about eight to twelve months. In 20,000 injections he had only once seen any bad result—a localized abscess at the point of injection. DR. SHAW MACKENZIE thought that the improvement during the Contagious Diseases Acts was due to the hospital treatment rather than to the machinery of the Acts, and that provision for such hospital treatment of both sexes, voluntary as opposed to compulsory, seems necessary at the present time. COLONEL F. H. WELCH, R.A.M.C., believed that the present state, especially abroad, of the army in its relation to venereal disease, is such as to require measures of prevention. All public measures of prevention must lie in the control of prostitution, and authorities abroad should be allowed a free hand in meeting the local conditions.

MR. A. H. WARD read a paper on

### THE RATIONAL TREATMENT OF SYPHILIS.

The following points were considered essential: (1) To push mercury to the toleration point and keep it there; (2) to commence treatment at the earliest possible moment; (3) to continue it throughout the normal period of the evolution of the disease; (4) to make treatment easy and not be irritating; (5) to take special care of the general health; (6) to recognize the value of water as an adjuvant to treatment.

COLONEL FRANCIS H. WELSH read a paper on the

PREVENTION OF SYPHILIS,

which he said can be brought about in two ways—hygienically through curtailing the lineal descent of the virus, sociomorally through curtailing prostitution. The evidence accruing during the last thirty-five years points to the conclusion that through surveillance of prostitution and segregation of the affected it is possible both to reduce the prevalence of the disease and to diminish its virulence. The disease must be attacked from all sides —morally, socially, and hygienically.

PROFESSOR E. LAPLACE of Philadelphia demonstrated a new forceps for intestinal anastomosis. The advantages claimed for this instrument are rapidity of operation, complete and water-tight union of opposed surfaces, and extreme simplicity.

MR. H. RUNDLE read a paper, entitled

NOTES ON 375 CASES OF VARICOCELE TREATED BY OPERATION.

The following inferences were drawn: First, that varicocele exists in a large number of young men, probably 18 to 20 per cent., and does not produce any physical discomfort; that it ought not to be considered a cause for disqualifying them, except in rare and pronounced cases, from entering the service; and, that such ordinary cases do not demand operative interference. Secondly, in cases in which an operation is required, ligature and excision of veins by an open incision is the best. It is a simple undertaking, free from danger and the result is excellent.

MR. JONATHAN HUTCHINSON, JR., whilst fully agreeing that the great majority of subjects operated on for varicocele possess no true pathological defect and suffer no real inconvenience, submitted that in a certain number the persistent aching and the risk of atrophy or softening of the testicle fully justifies the open operation apart from service consideration. He had seen a few cases in which atrophy of the gland followed severe varicocele. He thought some cases, in which the scrotum and cremaster are extremely lax, are only to be dealt with by free excision of the lower part of the scrotum and high ligature of the anterior bundle of veins. MR. J. A. BUCK mentioned a case in which atrophy of the testicle to the point of almost complete disappearance had followed the operation. He advised that only a portion of the veins be excised. COLONEL STEVENSON (Netley) believed that the cases operated on in the services, or the cases of candidates for the services are nearly always less marked than those in civil practice. The testicle is seldom atrophied. It is necessary to operate even on very slight cases in the army because a soldier with any physical disability, even a slight one, is practically useless for duties which he dislikes.

MR. L. A. BIDWELL read a paper on a

METHOD OF ATTACHING THE SKIN TO THE MUCOUS MEMBRANE OF THE RECTUM AFTER PERINEAL EXCISION.

After excising the rectum by the usual perineal racket-shaped incision extending to the tip of the coccyx, two transverse incisions are made on each side of the anus, and the skin-flaps are dissected up and attached to the mucous membrane of the rectum. In this way tension is diminished, and it is possible to unite the mucous membrane to the skin even after removal of several inches of the rectum. The duration of convalescence is shortened, the comfort of the patient is greater during dressings, etc., and the chance of cicatrical contraction is lessened.

MR. CARWARDINE (Bristol) described a

METHOD OF EXCISION OF THE RECTUM FOR CANCER,

the aim of which is the safe and complete excision of the rectum, and the contiguous lymphatic area and the functional restoration of the parts. He showed photographs of the various steps of the operation, and a patient upon whom he operated about a year ago. He extirpated the affected gut with the presacral glands and tissue in continuity. A new and bifid coccyx reformed from the periosteum. The operation was carried out as follows: The patient was placed prone, and the coccyx and second and third pieces of the sacrum were excised subperiosteally. Then a long knife was passed through the anus and out in the middle of the periosteum, and all the retrorectal tissues rapidly cut though. The rectum was completely isolated on all sides, avoiding the sphincter. The periosteum was deflected as far as required. Only the mucous membrane was divided above, and the whole presacral tissue and glands drawn down and cut across high up in the hollow of the sacrum. The upper bowel was united to the anus, and with but little drainage the periosteum and soft parts united by first intention. MR. C. RYALL read notes of a case of extensive transacral excision of the rectum, followed by perfect sphincteric control; 12 inches of the upper rectum and lower sigmoid were removed. After two subsequent operations the upper bowel was anastomized to the lower rectum.

MR. JAMES BERRY read a paper on

SEVENTY-TWO CONSECUTIVE CASES OF REMOVAL OF GOITER BY OPERATION (EXTIRPATION OR ENUCLEATION).

In nearly all the cases the operation was performed on account of dyspnea. He drew attention to the serious nature of the goiter in which a prolongation extends down behind the sternum. Many of his cases were of this variety. In ten cases the operation was performed through a transverse skin incision. The results as regards appearance were excellent. Of late he has been in the habit of operating with local anesthesia in all cases in which there is much tracheal obstruction. He reported 3 deaths in 72 cases, one from chloroform, and 2 from severe recurrent hemorrhage. In the remaining 69 cases the immediate and remote results were excellent.

G. E. ARMSTRONG of Montreal, read a communication on the

SURGICAL TREATMENT OF HEMORRHAGE FROM GASTRIC ULCER.

He recorded the results of the post-mortem examinations

at the Montreal General Hospital. In all cases of fatal gastric bleeding the hemorrhage was arterial, and was readily accessible to surgical treatment.

SECTION ON OBSTETRICS AND GYNECOLOGY.

In introducing a discussion upon the natural menopause compared with the menopause produced by removal of the uterine appendages, and the menopause produced by removal of the uterus without removal of the appendages, MR. BLAND SUTTON remarked that the functions of the ovary are not merely ovigerous; Graaffian follicles are to be regarded as mucous crypts, and the ovary as a ductless gland of the same type as the thyroid. The period of ovarian activity coterminous with that of the menstrual life, and the removal of the ovaries causes not only amenorrhea, but also a series of symptoms characteristic of the menopause. The uterus is structurally a hollow muscle forming an incubation-chamber for the reception and development of oosperms. The endometrium, from fundus to internal os, is the organ of menstruation, and the source of menstrual hemorrhage; but besides hemorrhage there are important vasomotor phenomena in menstruation. The normal menopause is the result of atrophy of the secreting elements of the ovary. In addition to cessation of menstruation, other disturbances are generally met with at this epoch, such as the phenomenon known as "flushing," mental irritability, and sometimes erotomania. The artificial menopause, likewise, is something more than arrest of the usual monthly hemorrhage. Removal of the uterus, although it produces amenorrhea and sterility, does not induce a complete menopause. Removal of the ovaries, on the other hand, is followed in a small proportion of cases by flushings, which he has known to occur as frequently as fifteen times in an hour. These signs do not supervene after removal of the uterus alone. Usually the patient passes through a quiet menopause without disturbances. No information was forthcoming as to the changes which occur in the ovaries left behind after removal of the uterus. Mr. Sutton urged that in peforming hysterectomy one ovary at least should be spared if possible, so as to avoid the production of a complete artificial menopause.

DR. REED of Cincinnati said that he agreed with the view that it is an advantage to leave a portion of the ovary if possible, but he sometimes found a second operation necessitated by disease of the retained portion. He drew attention to the importance of further study of the changes in the hematogenic functions at the menopause.

DR. STUART NAIRNE of Glasgow followed with a paper describing a

NEW AND MORE PERFECT METHOD OF COLPORRHAPHY.

This method consists in uniting the lateral vaginal walls from the cervix to the vulva, so as to divide the vagina into two canals of more or less equal capacity.

DR. MACPHERSON LAWRIE read a paper on

FIFTY CONSECUTIVE CASES OF CELIOTOMY FOR DISEASES OF THE UTERUS AND APPENDAGES, WITH FORTY-EIGHT RECOVERIES.

He affirmed that the principal factors on which good results in abdominal surgery depend are: firstly, asepsis, and secondly, careful hemostasis. As secondary points of less importance, he mentioned reasonable speed in operating, avoidance of unnecessary intraperitoneal manifestations, and careful after-treatment.

DR. ARCHDALL REID followed with a paper upon the

CAUSES WHICH RENDER DIFFICULT THE LABORS OF CIVILIZED WOMEN.

He stated his own view to be that the frequent use of forceps at the present time is rendered necessary by the steadily increasing difficulties attending labor in civilized countries. These increasing difficulties he attributed to the want of correspondence between the size of the pelvis and that of the fetal head, and in minor cases to rigidity of the soft parts. DR. SHAW-MACKENZIE next read a paper, entitled

THE SYPHILITIC FACTOR IN THE DISEASES OF WOMEN.

He pointed out the frequency with which pelvic inflammatory disease in parous women is associated with minor syphilitic sequelæ, and for the most part with previous abortion. Syphilis is often modified in women, the primary lesion being of a suppurative character, and the secondary phenomena being limited to erosions of the genital tract with purulent discharge. He advocated the treatment of pelvic inflammation by mercury and iodids. In subinvolution of the uterus that treatment is especially useful as opposed to the curette. In advanced inflammatory or suppurative lesions, however, it is not satisfactory, but in menorrhagia and metrorrhagia it is very useful.

DR. WARDEN of Paris followed with a short paper on the

TREATMENT OF PUERPERAL INFECTION IN THE MATERNITY HOSPITALS OF PARIS.

He referred to the importance of the early recognition of the infected state, as indicated by the pulse and temperature, and the importance of immediate local treatment by intra-uterine irrigation and careful curetting. The curette should never be used before the third day. PROFESSOR PINARD performs the operation without the use of anesthetics. After curettage the uterine cavity is swabbed out with a strong antiseptic, and packed with salol gauze.

THIRD GENERAL SESSION.

At the General Session on Thursday, August 3d, DR. ALEXANDER OGSTON delivered the Address in Surgery. Departing from the custom of the Association somewhat, instead of reviewing the progress made along surgical lines, he asked whether the advances made since Lister's discoveries have been placed within the reach of the naval and military medical services. There could be only a negative answer to this query, and in the latter portion of his address he outlined some plans to bring about a better state of affairs. He spoke, in part, as follows:

In all the busy centers of the earth is springing up a new race of surgeons, who effect as part of their everyday work marvels of cure that even thirty years ago, had

any one ventured to forecast them, would have been looked upon as the dreams of a visionary. And it is not merely surgery that has undergone a revolution. The discoveries of Lister are changing the aspects of medicine, midwifery, pathology, and many other provinces of medical science. It is, moreover, impossible to avoid the conviction that the open handed beneficence we now witness in the increased interest and support extended to public charities in all their forms has been in no small degree evoked by the great work he has enabled the surgical and nursing profession to carry out.

While, in many respects, we have good reason to praise the age we live in, no one fully acquainted with the state of surgery in our land can fail to be impressed by the fact that some of our medical and surgical brethren are still hampered by systems and restrictions which must be swept away. I venture to believe that in the City of Portsmouth it will not be out of place to advert to the condition of our Army and Navy Medical Services. These, since the surgical world was stirred to its depths thirty years ago by the doctrines of Lister, have been, I fear, gradually falling into a condition that cannot fail to evoke much anxiety regarding their present and future; and it appears to me that the present time is suitable for drawing attention to the reforms that may be necessary to ensure that, when the supreme moment arrives, the medical departments of these services will be found adequately prepared to undertake the duties they will be called upon to discharge. Recent events have demonstrated that we may be unexpectedly called upon to engage with both army and navy in European or even world-wide wars, such as would put their efficiency to the severest possible test.

It is moderate and reasonable to expect that the medical officers of the army and navy shall be able efficiently to perform their functions in time of peace, and fully be prepared for the eventualities of war. Yet no observant member of the profession can have failed to observe that the most talented graduates have ceased to aspire to enter the services; while those medical officers who possess a few-years' experience of the services admit they have made a mistake in entering them, and would gladly, were it possible, sacrifice the years they have spent in them and quit them entirely, even for some comparatively unpromising post in civil life. Consequently, year by year the medical services, especially that of the Queen's Army, have become more attenuated and undermanned. Oft-repeated experience, over the very same ground, has indeed taught us to conduct, in some respects, the medical part of expeditions in the jungles and swamps of West Africa, the deserts of the Nile, or the ravines of the Himalayas in a way that probably no other Power could excel or even equal. Our enemies there are poorly armed and our casualties few. But it dare not be inferred from this that we are in a condition to deal with a war against a Great Power, with arms and organizations at least equal to our own, in which large numbers of wounded—thousands instead of tens—must be treated.

Their duty in time of peace afford the army and navy surgeon, it is no exaggeration to say, scarcely any chance of acquiring the knowledge and skill that would be demanded of him in war. No surgeon can now, as in former days, rise suddenly out of the ranks of those destitute of special training, however eminent his natural abilities may be. He who is skilled in exercising his profession becomes so by many years of special training. No man who is but theoretically acquainted—be it in ever so perfect a fashion—with the mere doctrines of antiseptic surgery is able to step at once into the arena as a practical surgeon.

A standard of work at least equal in excellence to that of the civil surgeon ought to be expected of army and navy medical officers. Senn of Chicago, Chief Operating Surgeon with the United States Army recently in the field, and one who has done much for surgery, points this out in the following axioms:

1. That in theory and practice military surgery is equivalent in every respect to emergency practice in civil life.

2. That the wounded soldier is entitled to the same degree of immunity against infection as persons in civil life suffering from similar injuries.

3. That all formal operations in war must be performed where the wounded can receive the full benefit of aseptic and antiseptic precautions.

4. That operative interference is indicated in all penetrating wounds of the skull.

5. That gunshot wounds of the chest should be treated under the strictest antiseptic precautions.

6. That laparotomy in penetrating gunshot wounds of the abdomen is indicated in all cases where life is threatened by hemorrhage of visceral wounds, and the general condition of the patient is such as to sustain the expectation that he will survive the immediate effects of the operation.

Statistics show that wounds of the brain, chest, and abdomen form about twenty per cent. of all the wounds received in battle. There must, therefore, in the next great campaign, be an enormous field of usefulness for properly trained antiseptic surgeons, and a fearful waste of life if they be not there to occupy it. Yet who that compares the conditions under which the civil surgeon is formed with those existing in the Royal Army Medical Corps or the Navy will be so bold as to say that the latter furnish any adequate means of familiarizing their surgeons with the highly complicated and difficult procedures which they ought to be able to carry out with dexterity and success? Save a few connected with Netley—and perhaps Haslar—Hospitals, most officers have hardly once in their lives an opportunity of carrying out any important operation on the brain, thorax, or abdomen. How, then, can they undertake, with any prospect of a happy issue, the intricate steps of, say, a laparotomy in a gunshot wound of the abdominal contents, with all its complicated problems and perils? It can hardly be wondered at that a service entailing on those who enter it what is, from a professional point of view, almost an intellectual sterility, should be a mode of life out best graduates recoil from, and which few of them can be persuaded to adopt. Such scientific corps as, for instance,

artillery, engineering, and telegraphy have undergone extensive improvements and reforms in the last few decades. No means of enhancing their efficiency are neglected. For them all the inventions of modern science are studied, adopted, and improved. Tactics are studied, maneuvers held, officers and men practised and drilled, fleets and bodies of men are put in motion, and any unreadiness is observed and remedied. Yet the Royal Army Medical Corps and the Naval Medical Service, which demand a greater degree of practice and experience than either artillery or engineering, ere their delicate machinery can be brought into salutary use, are left in a condition which may have answered well enough fifty years ago, when rough-and-ready surgeons could do the rough-and-ready work then required, but which is out of harmony with the revolutionized conditions of modern surgery and the state of the medical service of the armies and navies of rival military powers. They would seem to be considered as less deserving of development than even such departments as the commissariat and transport —the contemptuous belief being apparently held that trained surgeons to attend the wounded in war can be summoned into the field at a moment's notice by the expenditure of so much money, like the horses, mules, and camels that an army requires.

To manage in this fashion is simply to ensure, when a critical time occurs, a repetition of the scenes of the Crimea, where admirable medical officers were made a sacrifice by the war authorities to appease the public indignation excited.

So complex an organization as the Royal Army Medical Corps ought to be kept in a high state of efficiency, and be vitalized by continual practice. Whether stationed at home or abroad, the officers should be provided with all the proper means of keeping themselves informed regarding the advances that are forever being introduced into their science. Were the reforms that naturally suggest themselves carried out, who can hesitate to believe that the best graduates would once more flock to and remain in them; and the country would not be placed in the dreadful position of having to pay, with the lives of its bravest and best, for the state into which its medical services have been allowed to drift.

More than the army the navy requires the touch of a reformer's hand. In the event of a naval engagement of any magnitude the wounded on board our ships of war would have to be attended to in a small dark room, unprovided with any save the rudest appliances and a few cots, where at most half a dozen men could be handled, and which is, moreover, in many vessels, as much exposed as any other part of the ship to the fire of the enemy. Were such a fighting bay rendered untenable the wounded, however great their need, could be attended to only by being lowered, slung in a vertical posture, down the narrow hatchways, where the shot is brought up from the magazines to the guns, and even these would not be available during the heat of an action. Everything on board ship that can destroy life is in the highest perfection, everything that can save it is of the rudest description and behind the age. We must lead rather than follow in naval matters, as foreign ships of war are constructed according to the example England sets. And our navy, being the most perfect and greatest destroying force of all the war fleets of the world we should be the foremost in introducing into it the best-planned methods of relieving suffering and saving life that can be devised.

Criticisms without suggestions are usually better unmade; and to call attention to defects in the services, without indicating the lines of remedy, would be almost unpatriotic. In countries where universal military service obtains the most eminent civil surgeons are at the disposal of the authorities in time of war, and in peace hold rank in the army, receiving promotion like those actively serving. They are soldiers in reserve and can be made use of wherever their eminence and special qualifications make them most useful in war. The idea of adopting this system among ourselves, but on voluntary lines, is no new one; although it presents obvious difficulties, they do not seem altogether insuperable, and, at any rate, such a plan is worthy of the attention of the War Office.

Much that is instructive may be learned from the medical services of Germany, where, of course, compulsory service exists. Every medical man who has served in the army at all is maintained for nineteen years under military orders—that is, he possesses a fixed rank, and is allotted, even in time of peace, a known military post which he would occupy if war broke out. Thus the university professors hold high military rank, and are required to give annual courses of instruction to the medical officers serving in the army or navy. Such well-known surgeons as Bergmann, Bruns, Trendelenburg, and Mikulicz have to teach these classes during the Easter holidays, so as not to interfere with the winter and summer sessions of the universities. In time of peace German army surgeons have the development of their professional culture ensured by the following measures: The most promising surgeons and assistant surgeons are sent on duty for a year at a time in the medical, surgical, and gynecological departments of the hospitals connected with the universities and in other large public hospitals not connected with them. The junior and assistant surgeons are also annually sent to attend the special courses of instruction in anatomy, surgery, and operative surgery mentioned above. The senior medical officers, nearly corresponding with our surgeon-majors, at least the most competent and promising of them, have to serve in rotation in the large military hospitals, in which are treated, not merely soldiers, but all kinds of ordinary patients; there they have to act as teachers and attend and take a share of the tutorial work among the pupils in the classes of the various professors; or they may be sent on duty for a year in the general hospitals, not only in the surgical, but also in the medical and gynecological wards. They have also to attend, as they may be ordered, annual courses in bacteriology; or they may be furnished with funds for traveling in other countries and studying their medical and sanitation arrangements.

In the Russian army and navy similar care is taken of

the professional culture of the medical officers. Russia possesses 6 large and 300 small hospitals connected with the army, besides smaller lazarettos; and in some of these the equipment is far in advance of anything the services possess in this country. Thus the military hospital of St. Petersburg treats all medical, surgical, gynecological, ophthalmic, and other diseases, consists of five separate clinics or infirmaries, each of which is complete in itself, and has 850 beds, 120 of which are for women, and 20 for children; and about 45,000 patients are treated per annum. In these clinics the students and assistants have to work in the most thorough manner, and study every kind of case. The hospital possesses a staff of 34 professors, 70 *privatim docentes*, and 47 assistants. Each department is furnished with an ample annual allowance for instruments and apparatus, and has liberal provision of everything calculated to assist the most advanced work and investigation; X-ray rooms, photographic rooms, electrical rooms, immersion lenses, centrifuges, etc., to an extent that excites the marvel and envy of British visitors. Russia has 300 surgeons in her army, and any of these may, if he shows ability and powers of work, apply for and be ordered to return to study in the hospitals for a period of two years. There he has to work as a regular assistant, and on proving his capacity may attain a place among the teachers of the institution; or he may be transferred to the hospital of some provincial city, and there continue to perfect himself in his profession, and further qualify himself for his duties in time of war. The Russian naval hospitals are arranged like their army hospitals; they exist in many parts of the empire, there being five large ones at different ports, besides one or two smaller ones; they admit civil cases of all kinds; and in them the medical officers possess opportunities of training themselves in all manner of high-class professional work.

In the French army post-graduate courses, expressly for medical officers, are conducted by professors at the different universities throughout the Republic, and the cost is borne by the Army Medical Department; while a certain number of the medical officers of the active and reserve army are every year ordered to attend them, extra pay being drawn by those who do so.

But enough has been said to show that we have much to learn from foreign countries; that, unless we follow their example, our officers, soldiers, and sailors who may be wounded in war will be attended to in a very imperfect fashion compared with those of other European Powers; and that our services stand in need of great reforms, which must be more or less of the following nature:

It would, first, be a great advantage to the services were a Section created for military and naval surgery at the annual meetings of this Association. Such a Section would furnish instruction as to the actual state of matters and what amendments are required. Reforms so initiated and urged on the authorities by this Association could not fail to be quickly introduced. The most clamant of all reforms is provision for the proper instruction of officers in their war duties. I cannot put too strongly the absolute necessity for at least one out of every five years of service being devoted to this. Officers receiving study leave should be sent to act as assistants, residents, and house-surgeons and physicians to our hospitals and schools of medicine, in the same way as our younger graduates who are in training for the highest places in the civil profession.

It is of the most vital importance that the development of military and naval hospitals should at once receive the attention of the authorities. They should, wherever it can by any possibility be done, be thrown open for the reception of ordinary patients from the civil population, and for the admission of diseases of all kinds. The hospitals are the heart of the services, and it is necessary that the authorities should be brought to recognize that this is so, and follow the wise examples set by foreign nations.

Our country ought to provide every fleet with a certain proportion of fast steamers, without armor or armament, flying the Red Cross flag, fitted up with wards, operation-theaters, and dressing-room, anesthetic, sterilizing, and apparatus-rooms, officered by a staff of surgeons and attendants, and in every way imitating the arrangements of the best civil hospitals. These should form as essential a part of every squadron as do the bearer companies and field hospitals of an army. The cost of such vessels would be small compared with ships of war, and the good they would achieve in great naval engagements, and even in ordinary times, would be unspeakable.

The fatal error of imagining that the Army Medical Corps can be supplemented by civil aid is one that has already done infinite harm; it has been made a constant pretext for hindering the due development of the services and producing the defects of which I have spoken, and is a mischievous delusion that cannot be too strongly combated. Were such a proposal made regarding any other scientific department, such as, say, the Royal Engineers, its absurdity would be at once perceived. At its best it is but a poor palliative, but can never be a cure.

I have been moved by the conviction that the present is a suitable time for one who is in the civil part of the profession to speak boldly what is in the minds of many civil surgeons, and is known to still more who are in the services themselves.

But I hope my motives will not be misjudged, and that what has been said may contribute in some degree to stir the profession generally, and this powerful Association in particular, to increased efforts to open the eyes of the British nation to the real state of matters, regarding which it is at present blind; so that when the Temple of Janus once more opens in our midst, the services may be found in such a state of preparation and efficiency as is demanded by the honor and well-being of our country and the interests of humanity.

[To be concluded.]

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***For Infantile Colic.—***

℞ Ext. hyoscyami . . . gr. iii
Pulv. ipecac. . . . . gr. iss
Magnesiæ . . . . . gr. xx.

M. Div. in chart No. X. Sig. One powder every three hours.—*Condie.*